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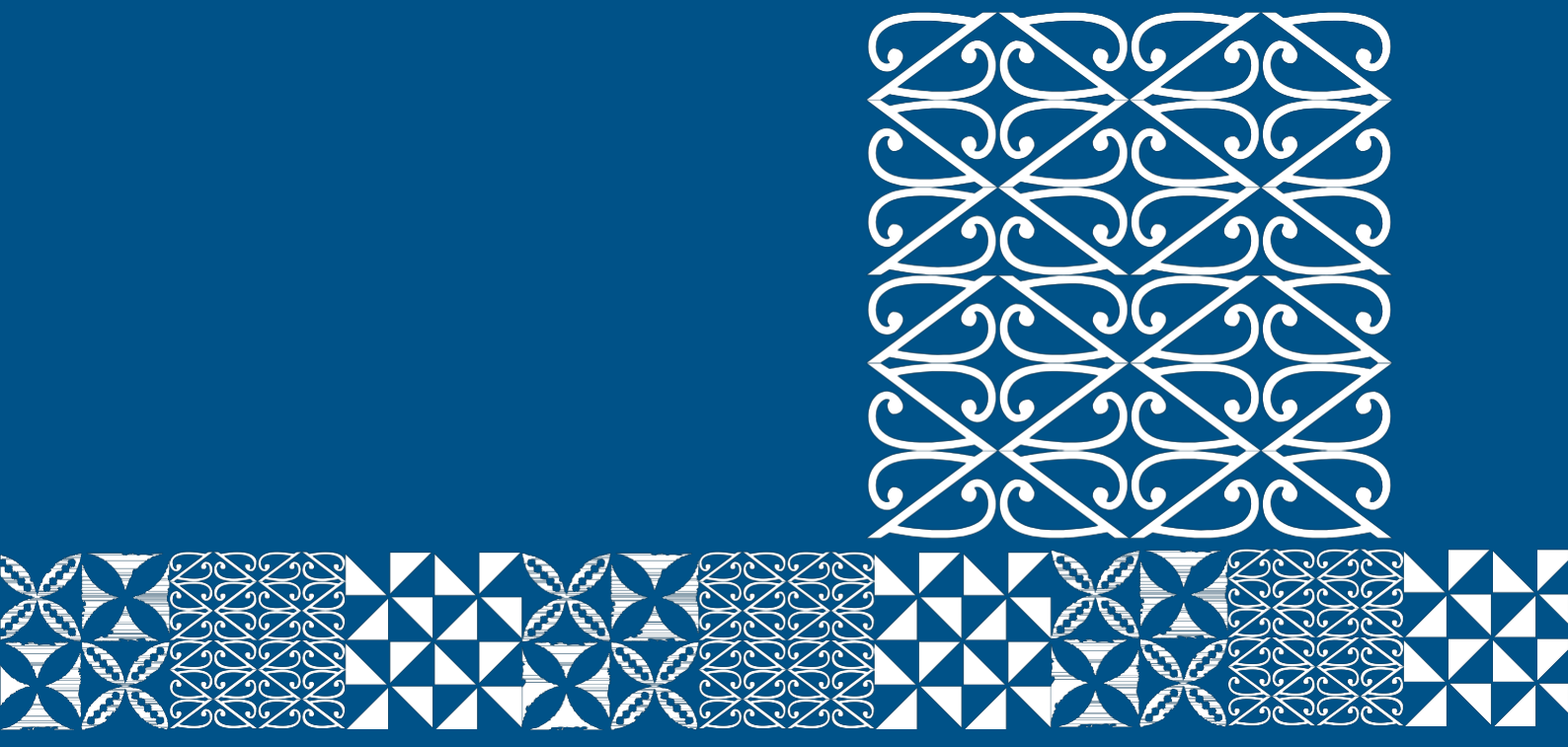
Ministry of Education

Research into the implementation of the Secondary Literacy Project (SLP) in schools



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Research into the Implementation of the Secondary Literacy Project (SLP) in Schools

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Acknowledgements

We warmly acknowledge the substantial contribution that different groups in the practice and learning community have made to the successful completion of the research project. It is hoped that this project will make a substantial contribution to the Ministry of Education's future plans for the achievement of secondary students in New Zealand.

We especially acknowledge the teachers, Principals and Literacy Leaders at the schools with whom we worked, and the Regional and Literacy Facilitators from the School Support Services for their time and contribution. We would like to thank the Principals, Literacy Leaders and participating teachers in the Case Study Schools for their further contribution.

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Executive Summary

Introduction

The Secondary Literacy Project (SLP) is a Ministry of Education funded professional development initiative in cross-curricular secondary school literacy (reading and writing). Each participating school received support, including professional development support and funding, over a two-year period. Thirty schools participated in 2009–2010 (Cohort 1), and another thirty in 2010–2011 (Cohort 2). The Woolf Fisher Research Centre is responsible for the national coordination of SLP. External professional development support is delivered via regional School Support Services.

The overarching aim of SLP is to increase the achievement of underachieving Year 9 and 10 students in reading and writing, to develop the kinds of sophisticated, subject-specific literacy skills and knowledge they need in order to succeed at school and beyond. There was a specific targeting of underachieving Māori and Pasifika students. For Māori students SLP was designed to give effect to *Ka Hikitia – Managing for Success.* For Pasifika students SLP was designed to give effect to *Pasifika Education Plan*, to improve outcomes for Pasifika peoples in New Zealand and increase Pasifika presence, engagement and achievement.

The expected outcomes of the project, over three years, were to raise student achievement in literacy in Years 9 and 10, particularly for underachieving Māori and Pasifika students; increase leaders' and teachers' knowledge and skills for evidence-based practice; enhance leaders' and teachers' knowledge of effective practice; and develop effective professional learning communities that promote ongoing inquiry into the effectiveness of literacy teaching and learning, professional learning, collaborative problem solving, and reflective practice. The measure of literacy achievement was e-asTTle Reading[1] and all SLP schools were required to assess all Year 9 and 10 students using e-asTTle Reading at the beginning and end of each year. Because of difficulties with the tool in 2009, judgements about effectiveness of SLP overall and relationships with implementation features are very tentative.

Purpose of the Research

The overarching aim of SLP is to increase the achievement of underachieving Year 9 and 10 students in reading and writing, specifically targeting underachieving Māori and Pasifika students. The expected outcomes of the project, over three years, were to:

1. Raise student achievement in literacy

2. Increase leaders' and teachers' knowledge and skills for evidence-based practice

3. Enhance leaders' and teachers' knowledge of effective practice

4. Develop effective professional learning communities that promote ongoing inquiry into the effectiveness of literacy teaching and learning, professional learning, collaborative problem solving, and reflective practice.

[1] http://e-asttle.tki.org.nz

Specific purposes of the Research into the Implementation were to:

1. Test the fidelity of the implementation of the SLP model and the significance of variations in implementation of the model in terms of the intent of SLP

2. Develop theoretical understanding of the processes of implementation across contexts

3. Enable refinement and modification of the model for SLP from evidence of implementation.

The associated research questions were:

1. What is the (theory of the) generic model as intended?

2. What are the variations to the model as implemented at facilitator and school levels?

3. What explains the variations at different levels? To answer this question possible sources of influence to be investigated included: (a) beliefs, knowledge and goals relating to the model including the purposes and foci for underachieving students, particularly in schools with low achievement levels for Māori and Pasifika students; (b) attributes of inquiry at each level including problem solving and needs-analyses in schools; and (c) properties of schools including leadership and management.

4. What are the relationships between the SLP model as implemented in the schools and achievement results across schools for underachieving students, particularly in schools with low achievement levels for Māori and Pasifika students?

SLP Project Design

SLP was intended as a school-wide literacy project. It aimed to improve student literacy achievement across the curriculum for underachieving Year 9 and 10 students, specifically targeting underachieving Māori and Pasifika students. It was intended that this would be done through the development of strong literacy leadership, more effective literacy teaching across the curriculum and more effective school leadership and organisational structures.

These were built through:

- A process of inquiry that was implemented at each level of the implementation model
- An associated practice and knowledge-building process to develop the knowledge base to inform teaching practices and inquiry
- Organisational and leadership structure conducive to enhancing professional learning communities
- Mechanisms to promote coherence
- Cascading implementation.

In both the SLP project overall and in this research component, we have taken a specific stance in relation to the focus on underachieving Māori and Pasifika students. Our stance has been that the schools selected for SLP have Māori and Pasifika students whose achievement levels and distribution are not well matched to nationally expected levels and distributions. This means the Māori and Pasifika students at these schools can be considered, as a group, as ‘underachieving’ (although we would prefer terminology that focused on the school, eg, the students are ‘underserved’). We have not focused on Māori and Pasifika students who are underachieving by comparison with peers at their schools, but rather nationally. Schools used their own data to identify how their Māori and Pasifika students were achieving

relative to national norms and distributions. They also used their data to identify where their own Māori and Pasifika students were in relation to other students in their school, and again in turn relative to national patterns.

The project took place over three years. The first cohort of thirty schools participated in 2009–2010, and the second cohort of thirty schools participated in 2010–2011. The first year of the project (2009) was devoted to testing and refining the implementation of the model at the school level. The second year of the project (2010) aimed to refine a theory of an Optimal Model for implementation which was then used to inform the professional development of both cohorts of schools.

The development and testing of what we have called an Optimal Model was an iterative process using multiple sources of evidence. Having collected initial data and from our review of the extant literature, we proposed and refined several dimensions of what the literature suggested was a generic model for examining the implementation of SLP. Values and features of these dimensions were examined against the evidence of achievement outcomes. The Optimal Model was developed using the dimensions from the generic model and testing these to produce the best values given the evidence.

Data Collection and Analysis

The evidence base came from four sources. Questionnaires were issued to Literacy Leaders (LLs) and Literacy Facilitators (LFs). Four Case Study Schools were selected, and interviews and in-depth analyses of their data provided a second source of evidence. The mid-year progress reports prepared by LFs were also analysed as an evidence source. Student achievement data (e-asTTle Reading) were also collected and analysed. The results of multiple analyses are summarised in relationship to the four research questions.

Summary of Findings

The Generic Model: Initial Implementation (2009) and development of an 'Optimal Model'

In essence, the implementation model was a cascading model of influence in which the National Coordination Team worked with the Ministry of Education personnel to design and implement SLP. The National Coordinator worked directly with regionally-based School Support Services LFs who in turn worked with designated LLs in individual schools. They worked with Focus Group teachers who activated new knowledge and practices in their classrooms. The original Focus Group concept was defined as a small group of (approximately 12) teachers to whom the LL delivered more intensive professional development and for whom funding for release was provided. A deliberate 'ripple' effect within a whole-school approach was designed by which Focus Groups and LLs would take new knowledge and practices to the rest of the staff. In practice, what occurred at each layer was not discrete. There was knowledge transfer both ways at each 'interface' as would be expected in discussion and professional development settings. For example, regionally-based LFs sometimes worked directly with teachers as a means of supporting LLs. Also it was not as hierarchical as it is presented for the reasons already noted, i.e., there was collaboration and exchange of knowledge and practices between parties involved at each layer.

The model had a focus on inquiry at all levels. It aimed to develop the expertise of LLs and Focus Groups, including increased pedagogical content knowledge in content area literacy. It promoted supportive school organisation and leadership and implementation programme coherence amongst levels and within schools, departments and teaching teams.

From the existing literature, several dimensions of a generic model were identified for examining the implementation of SLP. More details are provided in the body of the report.

Professional Learning Community Design

This dimension refers to the design of the Focus Groups of teachers, and particularly its relationships with students, with the LL, with the Senior Management Team and the ongoing relationships between each of the above and the wider staff. This organisation could vary in a variety of ways. Through the four sources of evidence this dimension was refined to those with a Student Focus, and those with another focus.

Student Focus with leadership and planned extension

In one type the Focus Group comprises those teachers who teach a common class or classes (Focus Class) of students. Here the evidence base and the focus of inquiry was specific to that common group of students (within one class) and their learning across the content areas represented by the teachers. Some of the schools which adopted a Focus Class approach were small schools in which all teachers of Year 9 and 10 were grouped around the classes that they taught. That is to say that all teachers were Focus Group teachers and all Year 9 and 10 students were in Focus Classes. Others were larger schools in which a small number of classes (typically 3 or 4) were selected as Focus Classes. It features a dedicated and highly active LL leading the inquiry with the Focus Group teachers, plus strong support by a member of the Senior Management Team; often a Deputy Principal with special responsibilities. It also features planned extension to the wider staff through staff meetings and structured professional development.

Other Focus

A range of other types are possible and were revealed through the questionnaires. The most frequent other types reported by schools were teachers being selected to represent content areas (*Content Focus*), no specific Focus Group but rather all teachers being involved (*Staff Focus*) or selection of potential leaders (*Leadership Focus*). In 2009, some large and some small schools adopted a Staff Focus model. In 2010, all schools with 12 or fewer teachers of Year 9 and 10 adopted a Student Focus model.

From the 2009 cohort (n = 23 schools), there was evidence supporting the effectiveness of the Student Focus design which was adopted by 10 schools (while 13 schools adopted various other foci). The evidence was both quantitative and qualitative. Given the questions about the achievement data, analyses of relationships with achievement are very tentative (and this applies to each of the dimensions below). Comparisons were made between schools with Student Focus compared with Other Focus, specifically on e-asTTle Reading Scores (e-aRs) and gains for Māori and Pasifika students (seeTable 13). These showed some marked differences in scores (range from d = 0.41 to d = 1.54) at the schools with Student Focus compared with Other Focus, and large differences in gains at Year 10 (d = 0.84), but not at Year 9 (d = 0.13). Although overall the project was associated with greater gains in Year 9 than in Year 10, this shows within the generally weaker gains in Year 10 there was an advantage for students in Focus Class schools.

Implementation Level

This dimension was composed of several parameters. The implementation could be evaluated in terms of intensity and breadth (eg, frequency and length of Focus Group sessions), integration into the schools' programmes with high coherence between SLP and other programmes, and level of supportive leadership. There was inconsistent evidence from questionnaire data for the range of implementations on this dimension being related to levels of achievement or gains. The likely explanation for this was that the majority of schools implemented a relatively intense model. For example, in 20 schools, five or more sessions were held over 2009 with Focus Group teachers, which typically ran for two hours or more. Similarly, the majority of schools had four or more sessions with the whole staff which typically lasted between thirty minutes and two hours. The qualitative data from the Case Study Schools more strongly reinforced the claim that this was an important dimension in the level of implementation.

Inquiry

The third dimension was concerned with inquiry about teaching. Specifically this tapped the level and potential informativeness of the inquiry as part of teacher professional learning in the schools. Again, there was inconsistent evidence for this dimension being related to achievement, and in some instances there were quite strong negative correlations between amounts of reported inquiry and achievement. This may be because of variation in levels of inquiry which was in response to particularly strong learning (and teaching) needs; that is, schools with very low achievement levels may report more intense inquiry.

Content: Student Focus

The 2009 schools differed on whether they had adopted the SLP guidelines and had a specific focus on Māori and Pasifika students who were underachieving when considered in terms of national expectations. By default, given that the 2009 analysis conducted by the SLP coordination team was restricted to students scoring 3A and below on e-asTTle Reading (because of problems with the tool), the students in the statistical analysis were relatively low achieving. Nevertheless, there were some differences between schools. Almost all school targeted 'all' students, but the LLs at only eight schools identified Māori and Pasifika students as the specific focus. However, when tested in a number of ways, this difference was not statistically related to achievement outcomes.

Summary

The Optimal Model derived from these data is one that has a core design focused on common students (Focus Class), where the Focus Class teachers have considerable guidance and professional input from the LL, and at least one member of the Senior Management Team is an active and dedicated supporter. The professional development has high intensity and breadth in the sense of having frequent sessions and planned extension to the whole staff. Inquiry processes which are evidence-based are focused on the common students, within the context of an overarching concern for underachievement and Māori and Pasifika students' achievement. SLP would have high coherence with the core programme in the school and other intervention programmes. Further details are contained in the body of the report.

However, the data from 2009 indicated some barriers to achieving a closer fit to this model in 2010. The first was a need to have an appropriately recognised and resourced position as LL. Half of the LLs identified having not enough time and competing priorities to implement their role. In the report an analysis of funding and resources is provided which, when compared with other programmes, would suggest that in SLP the LLs had a less than optimal focus on SLP. A limited estimate of the overall funding per school per year, including research and evaluation, suggested that SLP was resourced at approximately $50-60,000 per year per school (from both Ministry and school funding; see Table 1 in the full report). The second barrier was the expertise of the LL as the leader of inquiry. Although LLs tended to rate their knowledge of effective practices in adolescent literacy highly, they were less positive about using evidence to identify and prioritise needs (13 LLs rated themselves as confident and 9 rated themselves as not very confident).

Together, the Optimal Model and the identified constraints from the 2009 evidence were fed back to Cohort 1 and Cohort 2 schools at the beginning of 2010. Specific emphases (and guidelines) were identified for schools to:

- Increase levels of intensity of implementation
- Increase degree of coherence in specific areas, and specifically position SLP as central with which other interventions should be deliberately integrated
- Increase leadership support
- Focus inquiry on specific evidence to do with learning and achievement, and specifically for the underachievement of Māori and Pasifika students
- Build the expertise of the LLs

- Employ Focus Class organisation more widely.

Implementation in Cohort 1 and Cohort 2 schools in 2010 could be compared directly against these six evidence-based directions. In the next section, evidence for how the SLP shifted in its implementation further towards the Optimal Model is presented.

Shifts in Implementation from 2009 to 2010: Explaining Variation

A limited comparison between elements of the Optimal Model of implementation can be made between 2009 and 2010. The comparison is limited because some items on the Literacy Leader questionnaires changed across years, and because only Cohort 1 schools were represented in the 2009 data, while both Cohort 1 and Cohort 2 schools provided the 2010 data.

The limited comparisons suggest that the levels of implementation increased in four specific areas. Leadership support within the schools changed, as there was greater contact between LLs with the Principal or Senior Management Team in 2010 and there was a 50% increase in Inquiry (as indexed by observations and feedback sessions with teachers in general as well as with Focus Group teachers). There was evidence of an increased focus on Māori and Pasifika students and underachievement from 2009 to 2010 and the Focus Class organisational structure was more widely adopted by schools (with an increase of over 50%). Overall, there was some indication that LLs felt they knew more or were more confident about their knowledge in 2010. However, the implementation appears not to have changed in the area of degree of Coherence with other professional development programmes in the schools, nor in Intensity.

The evidence for 2010 from both the LFs and the LLs was that there was a reasonable or close to medium level of implementation in these areas. However, whole-staff and departmental foci were the lowest rated of all the dimensions with wide variation by both LFs and LLs (though LFs were not questioned about the departmental focus).

Implementation 2010 and Achievement

Of the dimensions of the Optimal Model in which schools varied in 2009, the only one associated with achievement was the Focus Class organisation. The same was true in 2010 when more systematic analyses were completed. The analyses were now based on comparisons between those Māori and Pasifika students in a Focus Class organisation versus those not. Not all students in Years 9 and 10 were in Focus Classes. The students in a Focus Class tended to be the lower achieving students. At Year 9, Māori students in Focus Classes made significantly greater gains than Māori students not in Focus Classes in the same school. This amounted to a 44% increase over expected gain (31 e-aRs) by those in Focus Classes, compared with a less than expected gain (20 e-aRs) by those not in Focus Classes. The effect size was small to moderate (d = 0.21), but students were within expected curriculum levels in Term 4, 2010. A similar pattern occurred at Year 10 where Māori students in Focus Classes made significantly greater gains (28 e-aRs) which were close to four times more than students not in Focus Classes (8 e-aRs) and were within expected curriculum levels. The effect size was moderate (d = 0.37). This is a comparison between groups *within an intervention*. Given all Māori students received the intervention in some form, the effect size reflects a very significant educational finding. The marked pattern for gains did not hold at either Year 9 or Year 10 for Pasifika students, although at Year 10 the difference in gain meant that Pasifika students were within 1 sub level of their expected curriculum level.

Apart from Focus Class variation between schools, none of the other dimensions of the Optimal Model as judged by the LLs and LFs were systematically associated with achievement patterns. There are several reasons for this nil finding. There are psychometric possibilities (the variation between schools was not enough); there are measurement and conceptual possibilities (these are not the right dimensions); and there are possibilities to do with how the dimensions interact with characteristics of schools which mean simple linear relationships are not likely (eg, Intensity may vary positively with the degree of need for professional development in a school).

Implications

1. An appropriately recognised and resourced position is established as the leader of inquiry and professional development within the school, with status and time to implement the role.

The trends across 2009 and 2010 suggest that SLP was implemented in part with increasing fidelity towards what we describe as an Optimal Model. The level of Inquiry increased, the perceived focus on underachievement and Māori and Pasifika students increased and the use of Focus Class structure increased. However, some areas remained at 2009 levels, specifically the Intensity of implementation (eg, number of whole-staff sessions) and the Coherence (eg, degree of integration with other programmes including implementation of the New Zealand Curriculum in the school). These limits appear to be related to constraints identified at the school level, especially the need to ensure through training, school organisation and funding levels that an appropriately recognised and resourced position is established as the leader of inquiry and professional development within the school, with status and time to implement the role. A limited estimate of the full costs (Ministry, School, National Coordination and Research) per school per year suggests approximately $50-60,000 per school (see Table 1). This may not provide enough funding to enable effective levels of leadership in a 'ripple' process within the school involving teacher release and whole staff and departmental meetings, where systematic professional learning communities are established and maintained. Schools reported less focus on SLP than other, apparently higher funded, programmes at a school level. Currently, no research evidence exists in New Zealand that provides cost-benefit comparisons between interventions. Some very successful school change programmes report one or more full time staff placed in, or released in, a school to implement change at a school level (McNaughton, 2011).

2. A Focus Class organisation needs to be present in intervention designs for secondary schools.

A major finding is that a Focus Class organisation is strongly indicated in intervention models in secondary schools. SLP provides the first systematic evidence for New Zealand contexts of the significance of a student focus in implementations. Other projects have adopted forms of this organisation, including Te Kotahitanga and projects by Starpath. The evidence supports making this an evidence-based design feature. However, there are caveats. The evidence from SLP also shows that without sufficient resourcing including a dedicated role within a school, the wider effects on staff and programme coherence may be threatened.

3. Further research into and testing of an Optimal Model for intervention in schools needs to be undertaken.

No other dimensions of the Optimal Model appear to be related to student outcomes. There are several possible reasons for this nil finding. The implication is that more research is needed on how these features of an Optimal Model impact at the level of school and classroom implementation on teaching and learning, with specific attention to parametric analyses (eg, how 'much' of these dimensions is needed to achieve what effects?) as well as qualitative analyses (eg, what are the qualities of effective data discussions focused on the literacy needs that make a difference to the underachievement of Māori and Pasifika students?). Ongoing research suggests that effective data discussions need to be very specific and, to be effective, draw on extensive pedagogical content knowledge (Lai, Timperley, & McNaughton, 2010).

4. A research and development model built around a leader of inquiry is suggested.

Going further beyond the direct evidence, there are suggestions from this research and evaluation that a model other than the cascading implementation model might be needed. A new model would focus the functions of inquiry and implementation more directly within the role and function of the leader of inquiry and professional development in the school. In this model, a research and development team would provide direct professional development support and research and evaluation support to build the expertise for that leader to design and lead the systematic inquiry into students' needs and the fine-tuning of instruction across content areas. The role would need extensive graduate level

training and would need to be a specifically designated and funded position rather than an 'add on' or modification of an existing project such as a HOD. Rather than a cascading model, a research and development partnership model may be more powerful (McNaughton, 2011). This would involve an overlap involving professional learning communities with the Lead Teacher at the union (the common intersection).

5. Impacting reading and writing at Years 9 and 10 may not be sufficient to enable higher pass rates consistent with Ka Hikitia targets and the expectations of the Pasifika Education Plan.

Analysis of the effects of the implementation on student achievement will be completed through the National Coordination reporting process. The data from 2011 will be crucial for this because these achievement data will provide the first full data set of longitudinal changes in literacy across two years (for the Cohort 2 schools). Analyses will not be restricted to Years 9 and 10. The National Coordination Team is also analysing trends in pass rates at NCEA levels. This is an appropriate requirement from the SLP design. A very significant research and policy question remains: Is the focus on underachievement in Years 9 and 10 necessary and/or sufficient to impact markedly on measures of engaging in the New Zealand Curriculum and, notably, nationally expected levels of success at NCEA Level 2 and University Entrance for Māori and Pasifika students? If the answer to that question is largely negative, then new implementations of professional development for secondary literacy may need to shift their focus. The concern here is that impacting reading and writing at Years 9 and 10 may not be sufficient to enable higher pass rates consistent with *Ka Hikitia* targets and the expectations of the *Pasifika Education Plan*.

1. Overview

1.1 Introduction

The Secondary Literacy Project (SLP) is a Ministry of Education (MoE) funded professional development initiative in cross-curricular secondary school literacy (reading and writing). Each participating school received support, including professional development support and funding, over a two-year period. Thirty schools participated in 2009–2010 (Cohort 1), and another thirty in 2010–2011 (Cohort 2). The Woolf Fisher Research Centre is responsible for the national coordination of SLP. External professional development support is delivered via regional School Support Services (SSS).

SLP is part of the MoE's wider strategy to develop strong foundation learning and to ensure that students are at school, engaged in their learning and achieving in their early secondary school years so that they are able to achieve the skills and qualifications required for work, training or further study. Raising the achievement of all students, and underachieving Māori and Pasifika students in particular, is an urgent focus for the Ministry, as set out in *Ka Hikitia – Managing for Success*, and the *Pasifika Education Plan.*

In both the SLP project overall and in this research component, we have taken a specific stance in relation to the focus on underachieving Māori and Pasifika students. Our stance has been that the schools selected for SLP have Māori and Pasifika students whose achievement levels and distribution are not well matched to nationally expected levels and distributions. This means the Māori and Pasifika students at these schools can be considered, as a group, as 'underachieving' (although we would prefer terminology that focused on the school, eg, the students are 'underserved'). We have not focused on Māori and Pasifika students who are underachieving by comparison with peers at their schools.

The vision of *The New Zealand Curriculum* and *Te Marautanga O Aotearoa* is a teaching and learning framework that equips all young New Zealanders to be confident, connected, actively involved lifelong learners. SLP is informed by these two curriculum documents, and can be used to support schools' implementation of the New Zealand Curriculum through aspects such as the development of an inquiry approach to teaching and learning, and effective literacy teaching pedagogy.

Secondary schools offer unique issues for school-wide training. Cross-disciplinary cooperation is seen as a major challenge for professional development (PD) in secondary schools due to the compartmentalisation by subject area (Thibodeau, 2008; Timperley, Wilson, Barrar, & Fung, 2007). Wilson (2009) sets out a proposed model of PD in SLP that attempts to mitigate these factors by developing literacy leadership, more effective literacy teaching across the curriculum and more effective school leadership and organisational structures. This theoretical Optimal Model has been informed by recent research and draws its origins from SLP.

1.1.1 Research into the Implementation

Specific purposes of the Research into the Implementation were to:

1. Test the fidelity of the implementation of the SLP model and the significance of variations in implementation of the model in terms of the intent of SLP.

2. Develop theoretical understanding of the processes of implementation across contexts

3. Enable refinement and modification of the model for SLP from evidence of implementation.

The associated research questions were:

1. What is the (theory of the) generic model as intended?

2. What are the variations to the model as implemented at facilitator and school levels?

3. What explains the variations at different levels? To answer this question, possible sources of influence to be investigated included: (a) beliefs, knowledge and goals relating to the model including the purposes and foci for underachieving students, particularly in schools with low achievement levels for Māori and Pasifika students; (b) attributes of inquiry at each level including problem solving and needs-analyses in schools; and (c) properties of schools including leadership and management.

4. What are the relationships between the SLP model as implemented in the schools and achievement results across schools for underachieving students, particularly in schools with low achievement levels for Māori and Pasifika students?

1.2 SLP

1.2.1 Project Aims

The overarching aim of SLP is to increase the achievement of underachieving Year 9 and 10 students in reading and writing, specifically targeting underachieving Māori and Pasifika students. The expected outcomes of the project, over three years, were to:

1. Raise student achievement in literacy

2. Increase leaders' and teachers' knowledge and skills for evidence-based practice

3. Enhance leaders' and teachers' knowledge of effective practice

4. Develop effective professional learning communities that promote ongoing inquiry into the effectiveness of literacy teaching and learning, professional learning, collaborative problem solving, and reflective practice.

It is important to note that while underachieving students are the main focus of SLP, this should not be read as a narrow 'remedial' approach to literacy. Rather, the aim is to help all Māori and Pasifika students develop the kinds of sophisticated subject-specific literacy skills and knowledge they need in order to succeed at school and beyond, thereby raising the overall underachievement of Māori and Pasifika students.

SLP aimed to improve Māori student achievement by giving effect to *Ka Hikitia – Managing for Success*, and Pasifika student achievement by giving effect to the *Pasifika Education Plan.*

1.2.2 The Literacy Focus

> *Adolescents entering the adult world in the 21st century will read and write more than at any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives. They will need literacy to cope with the flood of information they will find everywhere they turn. They will need literacy to feed their imaginations so they can create the world of the future. In a complex and sometimes even dangerous world, their ability to read will be crucial. (Moore, Bean, Birdyshaw, & Rycik, 1999, p.3)*

"As language is central to learning and English is the medium for most learning in the New Zealand Curriculum, the importance of literacy in English cannot be overstated" (Ministry of Education, 2007, p.18). All teachers are teachers of literacy because all students learn through language. Language is fundamental to thinking and learning. Language is the primary means by which we gather and communicate information. The links between language use, thinking, and learning are well known (Bruner, 1974; Vygotsky, 1986). At secondary school levels, students increasingly need to use specific forms of written language to represent and examine their ideas, to formulate new knowledge and to express their understandings. Literacy strategies are vital for successful learning and achievement in our secondary school system.

Language demands and cognitive demands across the secondary school curriculum are considerable, so secondary school presents learners with many literacy challenges. In every subject area, students need to read and write increasingly sophisticated texts as they progress through secondary school.

1.2.3 SLP Project Design

SLP was intended as a *school-wide* literacy project. It aimed to improve student literacy achievement across the curriculum, through the development of strong literacy leadership, more effective literacy teaching across the curriculum and more effective school leadership and organisational structures.

These were built through:

- A process of inquiry that was implemented at each level of the implementation model
- An associated practice and knowledge-building process to develop the knowledge base to inform teaching practices and inquiry
- Organisational and leadership structure conducive to enhancing professional learning communities
- Mechanisms to promote coherence
- Cascading implementation.

Inquiry

The SLP is underpinned by an inquiry and knowledge-building approach that will support schools to develop evidence-based professional learning communities, and to deliver effective PD in the area of cross-curricular literacy teaching and learning. The overall PD model of SLP is characterised by the teacher inquiry and knowledge-building approach summarised in Figure 1.

Figure 1: Teacher inquiry and knowledge-building cycle to promote valued student outcomes (based on Timperley et al., 2007)

The inquiry undertaken in schools was expected to be informed by common project tools. Inquiry involved two actions.

Needs-Analysis

The intervention, at all layers, was tailored to meet identified and prioritised needs. Instructional time (for both student and teacher learning) is a limited resource and therefore the *knowledge-building* aspect of the model (eg, instruction for students, PD for teachers) was designed to be informed by the *inquiry* aspect.

Evaluation

Ongoing inquiry is needed to ensure that changed actions (at each level of the intervention) are resulting in the outcomes that were intended.

A more detailed rationale for the use of an inquiry and knowledge-building approach in SLP is outlined in the *Guidelines for Effective Adolescent Literacy Instruction* (GEALI, Wilson, 2009).

There were three interrelated levels for inquiry in SLP. The first was inquiry about student literacy learning needs. Addressing student learning needs was the central focus of SLP. This needs-analysis was framed in regard to the *Literacy Learning Progressions* (Ministry of Education, 2010), e-asTTle data, the GEALI and other formal and informal sources of student evidence as appropriate. It was important to identify and prioritise specific areas of literacy student need, so that the PD targeted those particular areas of student learning need that were likely to be most 'catalytic' when addressed. While there was no formal collection of asTTle writing at a national level, writing remained an important focus of this project. The GEALI were inclusive of reading and writing.

The second level for inquiry in SLP was inquiry about current teacher knowledge and practice. This needs-analysis was intended to employ a range of formal and informal sources of evidence, framed by the GEALI. This inquiry was intended to explore the relationship between teacher knowledge and practice, and student literacy learning. In particular, it was important to identify problems in teacher knowledge and practice that contributed most to the specific student literacy learning needs that were identified.

The third level for inquiry in SLP was inquiry about characteristics of school leadership and organisation. This needs-analysis and subsequent PD was intended to be framed in regard to the tool *Maintaining Momentum* (Wilson & Lai, 2009) and other formal and informal sources of evidence.

This inquiry was intended to explore the *relationship* between school organisation and leadership knowledge and practices, and student literacy learning. In particular, it was important to identify problems in school leadership and organisation that contributed most to the specific student literacy learning needs that were identified.

Knowledge

It was expected that after two years of involvement the schools' Literacy Leaders (LLs) would have sufficient knowledge and confidence to be able to lead ongoing improvement in the schools' literacy teaching and learning. The knowledge required by both LLs and teachers can be summarised in three principles and guidelines. All resources and PD were designed to operationalise these.

The fundamental principles underpinning these aspects of inquiry were that effective teachers needed to develop expertise; effective instructional decisions needed to be based on quality evidence and ongoing inquiry; and effective instruction provides a set of optimal conditions for content-area literacy learning. These optimal conditions are that instruction provides students with extensive opportunities to engage with a wide range of appropriately challenging written text, and is differentiated to address individual literacy needs, interests and experiences. Effective literacy instruction clarifies and shares *literacy* learning intentions and criteria for success, and provides students with specific feedback about the *literacy aspect(s)* of their learning. Instruction supports students to make effective use of how texts are organised (eg, headings, different paragraph structures), develops students' skills to make links to prior knowledge and/or build necessary background knowledge and develops students' vocabulary and vocabulary-solving skills. It develops students' skills to employ key comprehension strategies and to flexibly use and integrate written, oral, and visual modes. It also develops students' skills in both receptive and productive language use, and to engage with text beyond a literal/factual level.

The PD for the LLs, based on these principles and guidelines, required them to engage in detailed literacy inquiry, together with effective literacy teaching, which would provide effective literacy professional development for their staff and literacy leadership. PD for the LL included participation in regional hui delivered by regional SSS, and one-to-one in-school support from the SSS Literacy Facilitator (LF) (including discussion, collaborative planning and facilitation, observation and feedback).

The SLP vision for effective adolescent literacy teaching is framed by the GEALI (Wilson, 2009). Cross-curricular teachers' adolescent literacy pedagogical content knowledge was developed at two levels: through intensive PD for a smaller group of 'Focus Group' teachers, and through less intensive PD for all other teachers of Years 9 and 10.

An initial Focus Group of approximately 12 teachers of Year 9 and 10 classes participated in intensive PD in effective literacy teaching each year. This PD was led by the school's LL, with support from the SSS LF. PD for Focus Group teachers included participation in workshops (alongside other Focus Group teachers) delivered by the LL, and one-to-one and/or smaller group support from the LL (eg, discussion, modelling, collaborative planning and teaching, observation and feedback).

In Year One (2009), the intervention had schools design the best organisational structure to suit their circumstances. Focus Groups of teachers could be formed in a range of different ways, but clearly, for the purpose of coherence, there had to be some common unit of organisation. For example, a Focus Group could be made up of the different core teachers of a particular class, of Heads of Departments, or of teachers from particular learning areas (eg, science and mathematics in Year One, and English and social science in Year Two).

SLP provided limited resources: the crude estimate is about $50-60,000 per school per year based on 2011 costs (Table 1). For this reason, decisions about Focus Group composition should have been made deliberately and strategically with

a view to spreading and embedding the learning into the wider school. It is unlikely that a passive approach to Focus Group composition (eg, relying on teacher volunteers) could have been sufficient to achieve this.

Table 1: Estimated Costs Per Year Per School (N = 30)

Source	Year 1	Year 2
MoE to school	$28,640	$14,510
Covered 0.16 FTE LL release in Year 1. The 0.1 FTE in Year 2 was shared with the school (based on 3MU @ top of the scale), and 8 days release for training, FG teacher release (12 teachers), contribution towards travel and operating costs, and teacher release for data analysis.		
School contribution	$7,410	$17,570
Covered FG teacher release for data analysis, planning, in-school workshops, teacher observation and 2 days of LL release.		
SSS literacy facilitation in schools	$14,225	$9,250 - $10,500 a
MoE funded (inclusive of an admin fee).		
National hui/training	$5,500	$5,500
Includes regular national meetings with LFs and NC, and the February national training (travel, accommodation) attended by the LF and schools (LL and SMT representative). MoE funded.		
National Coordination (inclusive of some evaluation services)	$4,000	$2,000
MoE funded.		
Research (October 2009–June 2011)	$1,500	$1,000
MoE funded.		
Evaluation	$1,000	$1,000
MoE funded.		
Total	$62,275	$51,580

Note. Table is based on data supplied by MoE, GST exclusive. In the funding model, a school was defined as the In-school literacy leader plus the 12 participating FG teachers.

[a] At discretion of the Faculty of Education.

Organisational and Leadership

The SLP vision for effective school leadership and organisational structures is articulated in the *Maintaining Momentum* (Wilson & Lai, 2009) tool. This tool was used to frame inquiry into this important aspect of SLP and to inform the intervention. It was expected that LFs met regularly with the school's Principal and/or Senior Management Team to work toward these goals. It was also recommended that, when appropriate, LFs made use of their wider SSS infrastructure, such as by involving Leadership and Management facilitators and/or SSS Managers to ensure that the school leadership met their commitments in terms of its Memorandum of Agreement with the SSS.

Implementation Coherence

A major challenge in a cascading model is achieving coherence, especially in an intervention in a complex secondary school context. Three aspects of coherence were particularly important in SLP.

Coherence of facilitation, leadership, teaching, and student learning

Decisions about PD must be based on a good understanding of the relationship between the different layers. For example, if the students' needs-analysis identifies students' vocabulary as a common 'gap', it would be important to understand how current teaching impacts on student vocabulary learning, and how current leadership and organisational practices contribute to that pattern of teaching through channels such as professional learning communities focused on evidence of teaching and learning.

Shared Approaches

Both students' and teachers' literacy learning would be enhanced when shared approaches are used to address common, prioritised areas of literacy learning need (Raphael, Au, & Goldman, 2009). Shared approaches can take place at multiple levels. This could include a whole-school level, eg, all teachers at all levels in the school use complimentary assessments of student learning and achievement across time (longitudinal data) and shared amongst departments. On a more detailed level it could include all teachers of a particular class or year level (across subjects), eg, all teachers of 10Wi learn how to make links to students' prior knowledge and knowledge of text features prior to reading.

This is not to say that having a shared focus means that all teachers were expected to teach in exactly the same way, or that there should not be differentiation or individualisation of instruction *within* the parameters of a shared focus. SLP provided teachers with opportunities to learn both in groups (eg, in Focus Group meetings and whole-staff workshops), and individually (eg, through observation and feedback from LL).

Taking a shared approach was more likely to be effective in addressing a common area of student need, developing a sense of 'collective efficacy' (collective sense of being in control and making a difference) and making effective use of the expertise that resides within the group. An approach in which individual teachers self-select their own preferred area of PD is unlikely to be as effective as teachers do not necessarily have the expertise to identify their (or their students') most important literacy learning need. There are not sufficient PD resources available to be able to address totally individualised needs, and it may contribute to students experiencing literacy instruction across the curriculum as fragmented and disparate.

Coherence of Literacy Pedagogical Content Knowledge

It was important that teachers developed a coherent understanding of effective literacy practice and therefore, over time, they needed to understand all the individual guidelines and principles that make up the GEALI and their relationships to one another. While it was entirely appropriate to prioritise one guideline at a particular stage of the project, it was always important to make links to the others; none of them is effective in isolation. For example, vocabulary instruction (Guideline 7) would be most effective when the teacher: makes decisions based on evidence (Principle 2), helps make learning explicit (Guidelines 3 and 4), activates students' prior knowledge (Guideline 6), links receptive and productive language (Guideline 10), links written and oral (Guideline 9), and so on. If vocabulary was identified as an important student need, it could therefore be used as an umbrella concept under which learning about the other guidelines can be organised. This is one way to help achieve coherence in the literacy learning content.

The scenario below illustrates the model for coherence at a school level.

Achieving Coherence: A Case Study

Needs-Analysis

The Focus Group teachers of 9Wi identified that, overall, breadth and appropriateness of vocabulary knowledge for curriculum and school tasks was one of the main patterns of need for Māori and Pasifika students at risk of underachieving, and that it was likely that this was contributing to their overall pattern of low literacy achievement. A particular concern was that when the LL compared the data of Year 10 students with the data of the same students one year before (when they were in Year 9) she found that they had made far less progress in reading than students had nationally.

The needs-analysis of teaching then focused on finding out how current teaching could be made more effective in developing students' vocabulary knowledge. The needs-analysis of teachers revealed that, overall, teachers already did a lot of vocabulary teaching but it was mainly restricted to subject-specific words (mainly nouns), that there was little opportunity for students to use new vocabulary productively, and that the purposes for vocabulary teaching activities were often not clear to students. It also identified that, more generally, students would benefit from more opportunities to read, write, speak and listen, and that there needed to be more amplification and less simplification in instruction. It seemed likely that these teaching practices were contributing to the inadequate progress that students were currently making.

A needs-analysis of existing school leadership and organisational structures was then carried out, using *Maintaining Momentum* as one tool, to see how these might impact on current teaching practices. This needs-analysis identified that most teachers were not aware of the e-asTTle reports indicating that this was a problem. There was also a lack of shared teacher understanding or approaches to vocabulary practice within and across departments. In addition, the Principal seemed to actively promote a culture of silent classrooms that contributed to teachers avoiding small group discussions. It seemed likely that these factors contributed to some of the less effective teaching practices thought to contribute to current gaps in students' vocabulary learning.

Intervention

The LL, in collaboration with the LF, then planned a one-year programme of literacy PD aimed at improving teacher knowledge and practices in the areas identified in the needs-analysis. The PD plan was reviewed and changed regularly on the basis of both teaching and student learning.

The PD programme was specifically geared towards increasing the range and depth of students' vocabulary knowledge in target areas. However, vocabulary instruction (Guideline 7) was not the only aspect of teacher professional learning because it was also important that the teachers developed a broad understanding of effective literacy practice. The LL therefore provided PD about all the *Guidelines for Effective Adolescent Literacy Instruction* but used vocabulary instruction (Guideline 7) as an umbrella concept under which learning about the other guidelines could be organised. The LL therefore promoted the idea that vocabulary instruction would be most effective when the teacher: makes decisions based on evidence (Principle 2), helps make learning explicit (Guidelines 3 and 4), activates students' prior knowledge (Guideline 6), links receptive and productive language (Guideline 10), links written and oral (Guideline 9), and so on. This was one way to help achieve coherence in the literacy learning content.

The programme involved opportunities for whole-group learning in which the teachers developed common understandings and agreed to employ some common approaches in their classes. There were also opportunities for differentiation in the workshops and through one-to-one support in classes as teachers in the group obviously had different levels of expertise in the area of vocabulary teaching.

The LL then worked with school leaders to address some of the gaps identified in the initial needs-analysis. These included setting up school-wide structures for sharing e-asTTle Reading data and helping teachers interpret it; and the promotion, by the Principal, of a set of common principles for vocabulary instruction. Teachers were able to use any vocabulary teaching activities they saw fit, so long as they fitted with principles of effective vocabulary instruction and they had a means for judging their effectiveness.

Review

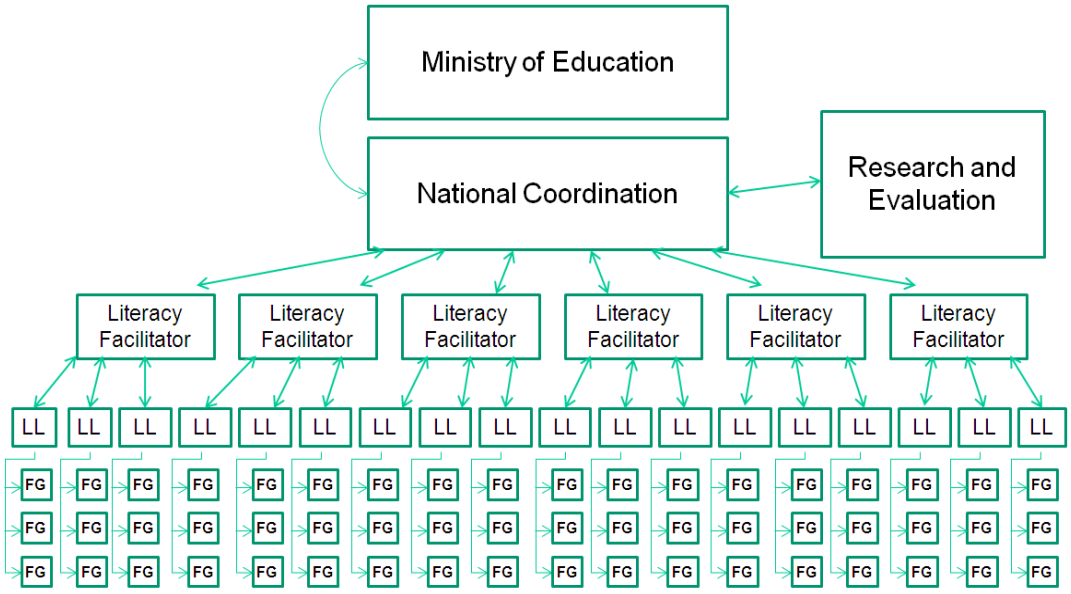
Inquiry, at each layer of the intervention, was carried out in an ongoing way throughout the year. For example, the LL would observe Focus Group teachers in order to evaluate what additional support they needed to adopt new practices effectively, as well as to work with the teacher to see if these new approaches were having the desired effect on student learning.

Less formal opportunities such as in-class writing and conferences around personal reading provided sources of evidence. More formal evaluation was carried out towards the end of the year using repeated measures. The end of year e-asTTle test revealed that students overall had made improved progress in vocabulary learning. The overall judgement was that the new teaching approaches, leadership and organisation were effective and should be maintained. Further investigation showed that students' use of vocabulary in their writing had yet to improve significantly and so teachers committed to putting a greater focus on productive vocabulary in the following year.

Cascading Implementation

In part, SLP fits with a 'cascading' intervention model in that the National Coordination Team supports LFs, who support LLs and school leaders, who deliver PD to teachers, who provide improved literacy instruction to better meet the identified learning needs of students. This is illustrated in Figure 2.

Figure 2: The cascading intervention model



In practice, what occurred at each layer was not as discrete as it appears in the simplified model above. For example, LFs worked directly with teachers as a means of supporting LLs. Nor was it intended that this be as hierarchical a model as it might appear, i.e., it was expected that there would be collaboration and reciprocal challenge between parties involved at each layer.

The appointment of a suitable LL was one of the first and most important decisions that schools needed to make when they joined SLP. The LL was probably the pivotal role in the whole project as he or she was the public face of SLP within each school. Key attributes of effective LLs are summarised in the document "Literacy Leader Attributes".

The LL committed at least four hours per week directly to their LL role. They were provided with additional time-release to attend up to eight regional and two national SLP hui (release was fully funded by MoE in Year One, with school/MoE shared funding in Year Two; some funding towards travel was also provided). They collaborated with the external LF and school leaders to carry out needs-analysis, plan professional learning and evaluate progress in accordance with the overall SLP design. They also facilitated Focus Group and whole-staff PD sessions and observed and gave feedback to Focus Group teachers. Finally, they ensured data gathering and reporting obligations were met, and that school leaders were kept informed of progress and issues.

The school leaders (Principal, Deputy Principal or Senior Management Team) actively promoted and participated in the professional learning and ensured that SLP aligned with the school strategic plan and all other initiatives or PD. They asserted the pivotal role of literacy learning in all aspects of the New Zealand Curriculum and publicly supported and promoted the status of the LL. They led change management and ensured that school structures and systems supported the implementation and ongoing effectiveness of the project. They also ensured that all contractual obligations were met, and involved the Board of Trustees and wider school community in the project.

The Literacy and Regional Facilitator provided each SLP school with the external expertise, leadership, support and challenge needed to achieve SLP outcomes. This time included work in school, in regional workshops involving LLs from other SLP schools, support via phone and email, and some planning time. They collaborated with LLs and school leaders to support needs-analysis, plan professional learning, develop structures and leadership attributes, and evaluate the intervention in accordance with the overall SLP design. They developed LLs' adolescent literacy pedagogical content knowledge and built the capacity of the LL to facilitate Focus Group and whole-staff sessions. The LF sometimes led some sessions for the purpose of modelling effective facilitation. They further built the capacity of the LL to observe and give feedback to Focus Group teachers, and supported the school to meet data-gathering and reporting obligations. They planned and delivered regional hui, and ensured that each SLP school's data-gathering and reporting obligations were met.

The National Coordination Team planned and delivered hui for LLs and/or LFs across a total of 29 days (Appendix A). They worked with the steering group (MoE plus Regional Facilitators) on the overall design of SLP to ensure effective and coherent implementation. They developed common tools and other resources to support SLP implementation (Appendix B). Finally, they gave feedback to SSS about their SLP implementation, analysed and reported analysis of e-asTTle student achievement data and provided policy advice to the MoE.

1.2.2 School Commitments to the Secondary Literacy Project

All schools in SLP were required to sign a Memorandum of Agreement with their regional SSS. They were required to commit to SLP being their major PD focus for two years. They committed to meeting some of the financial costs (eg, teacher release). They agreed to an active and visible commitment to the SLP by the school leaders, to appoint a LL and to use e-asTTle Reading and other SLP tools. They also committed to participation in all independent research and evaluation measures of the SLP.

More detail of the expectations of SLP schools are included in the Memorandum of Agreement, as well as the various application and acceptance letters and forms sent to the school prior to their joining the project. If a school was not meeting its commitments to SLP, it was expected that LFs would receive support through their wider SSS infrastructure, and that National Coordination and MoE would be informed about issues and steps taken to address

them. It should be noted that PPTA were asked to nominate a representative for SLP. The role of this person was to not only keep PPTA informed about the project and any arising issues, but also to act in an advocacy role for teachers to ensure the funded LL position and funded teacher release as set out in the MoA was allocated as intended to ensure in-school literacy leadership was developed.

1.2.3 Student Achievement Data

SLP schools were required to assess all Year 9 and 10 students using e-asTTle Reading at the beginning and end of each year. Schools were required to follow the conditions of testing (such as test composition, curriculum functions, deadlines) as advised by the National Coordination Team. They were also required to provide additional information as requested.

These data in various levels of aggregation were analysed for levels across school years and for gains over school years, using both e-asTTle Reading Scores (e-aRs) and corresponding curriculum levels.

Student achievement data collected in 2009 using the e-asTTle tool mandated by the MoE were unreliable due to a major issue in the calibration of these tests, which had the effect of inflating students' scores, particularly at levels above 3A. A wide range of problem-solving approaches was employed in 2009 in an attempt to obtain valid data, but all of these were ultimately unsuccessful, through no fault of any party involved in SLP.

These e-asTTle issues continued to affect the project in 2010 because of delays in the release of a 'new and improved' version. Despite assurances from the e-asTTle team and the MoE that SLP-specific tests would be available for the beginning of the 2010 school year, schools were not able to begin their testing until March 5 and to access to students' e-asTTle reports until mid-May 2010.

This had four significant negative implications for the whole project. Firstly, and most importantly, schools were not able to make timely use of e-asTTle as a key inquiry tool to inform their teaching, learning and PD programmes. While schools were encouraged to make use of other sources of student evidence, this delay has undoubtedly had some negative impact on schools' confidence in, and ability to engage with, SLP as a whole.

Secondly, some schools decided to use comprehensive tests for their Term 1 testing, rather than wait for the SLP tests to become available. Despite the release of a conversion tool, it was not possible to make valid comparisons when different forms of the e-asTTle test were used at the beginning and end of 2010. Thirdly, the recalibration meant it was not possible to track shifts in student achievement from 2009 into 2010. Fourthly, the National Coordination Team, schools and LFs had to spend considerable additional time in assisting schools with these challenges.

Analysis of e-asTTle was also complicated because e-asTTle does not currently have some of the functionality that the National Coordination Team was advised were intended to be developed. For example, there is as yet no function for matching student data longitudinally and significant amounts of data, such as school name, form class, and more detailed ethnicity data have to be added manually.

2. The Optimal Model and Actual Implementation in 2009

2.1 Developing Optimal Models: Research on the 2009 Cohort

The first year of the SLP project (2009) was devoted to testing and refining the implementation of the overall model at the school level. The development and testing of an Optimal Model as part of the research was an iterative process using multiple sources of evidence. Having collected initial data and from our reviewing of the extant literature, we proposed and refined several dimensions of a generic model for examining the implementation of the SLP. Values and features of these dimensions and the overall model were examined against the evidence of achievement outcomes. The Optimal Model was developed using the dimensions from the generic model and testing these to produce the best values given the evidence.

2.1.1 Method

The evidence base came from four sources. Questionnaires were issued to Literacy Leaders (LLs) and Literacy Facilitators (LFs). Four Case Study Schools were also selected, and interviews and in-depth analyses of their data provided a second source of evidence. The mid-year progress reports prepared by LFs were also analysed as an evidence source. Student achievement data (e-asTTle Reading) was also collected and analysed.

The questionnaire responses from LLs were analysed for specific dimensions. These dimensions comprised a specific set of questions within the questionnaire, and each possible response was given a score from low (1) to high (3). The full analysis for the 2009 questionnaire is contained in Appendix C, and an analysis comparing responses with the e-asTTle data is contained in Appendix D.

Most of the LLs reported that they were satisfied with the level of progress they had made toward meeting the goals of SLP. Only one LL reported that ‘little or no change’ had been made. Of the 26 LLs who returned questionnaires, 21 reported that teachers overall were more committed to literacy teaching, and 5 reported that teachers were neither more nor less committed. After one year in the project, 23 LLs felt more optimistic about the potential of the project to improve student learning; none felt less optimistic.

Nineteen LLs reported that the group of students they focused on in SLP were ‘all students’, while the remainder indicated ‘the lowest achieving students’ and ‘all Māori and Pasifika students’. No schools reported that their main focus had been on ‘the lowest achieving Māori and Pasifika students’. This suggested that there may not have been a consistent understanding of, and/or agreement with, the SLP overarching goal of ‘increasing the achievement of underachieving Year 9 and 10 students; specifically targeting underachieving Māori and Pasifika students’.

Our analysis of the questionnaires suggested that schools were consistently implementing SLP in a cross-curricular fashion. Focus Group teachers were most commonly selected for being core teachers of a particular class. Focus Group teachers represented a wide range of learning areas. For example, in 2009 all 30 schools had teachers from science and social science, 25 schools had teachers from English, 23 from mathematics, and 16 from technology.

The frequency and intensity of teacher professional learning opportunities provided varied from school to school. Focus Group teachers in 15 schools had met five to eight times, 6 had met less than five, and 5 had met more than eight times. Most of these professional development (PD) sessions with Focus Group teachers lasted for one to two hours (15 schools). Few Focus Group teachers appear to have been observed more than once. The expectation of SLP was that

LLs work with approximately 12 Focus Group teachers. This was derived from the funding model giving 12 teachers release days (3 or 4 teachers and class groups). However, only 10 LLs reported conducting more than 10 observations in total, and only 7 reported observing more than 10 Focus Group teachers. The number of workshop sessions provided and the number of observations held raises two important questions. Firstly, is the amount and frequency of professional learning time likely to be sufficient for shifting teacher knowledge and practice in a substantive way? Secondly, is the type of PD likely to provide teachers with sufficient support to transfer professional learning from a workshop to a content-area classroom context?

The majority of LLs indicated that at least some effort had been made to make coherent links between SLP and other interventions in the school. Only six reported that SLP operated independently, while 15 stated that 'mixed connections' had been made. Five LLs reported that SLP was 'fully integrated' with other interventions.

A second source came from Case Study Schools which were chosen to represent schools with relatively high gains and levels for all their Māori and Pasifika students in 2009 (HA1 and HA2) and schools with a relatively low gains or levels (LA1 and LA2). Interviews were conducted in 2010 with the Principal, LL, a Focus Group teacher and a non-Focus Group teacher at each Case Study School, and these were thematically examined in detail. A description of the key features of each Case Study School is presented in Table 2.

Table 2: Description of Case Study Schools

				Mean e-asTTle Reading Scores in 2009					
				Year 9			Year 10		
School	Decile	Location	Ethnicity	Term 1	Term 4	Gain	Term 1	Term 4	Gain
HA1	5	Rural	40% Māori, increased rapidly from 20% 7 years ago	1528.14	1568.27	40.13	1526.64	1650.81	124.17
HA2	4	Urban	Wide range (NZE, Māori, refugee & international students)	1521.02	1591.65	70.63	1530.44	1648.22	117.78
LA1	4	Rural	32% Māori, 2% Pasifika	1501.00	1570.32	69.32	1534.11	1569.61	35.50
LA2	2	Urban	52% Māori, 5% Pasifika	1499.67	1522.40	22.74	1487.81	1554.06	66.25

A third evidence source was the mid-year progress reports prepared by LFs and summarised by the National Coordinator who also gave feedback. The mid-year progress reports were completed by the LFs and reviewed by National Coordinator as part of the School Support Services (SSS) reporting requirement. The progress reports outline student, teacher and leadership learning needs, the evidence based on which these needs were identified, and a summary of actions planned to address these needs.

The fourth source was the e-asTTle Reading student achievement outcomes for 2009. The general approach was to test for relationships between the various achievement outcomes (gains and levels of Māori and Pasifika students for Year 9 and Year 10 in 2009) and dimensions as indicated in the questionnaires, mid-year reports and the Case Study Schools. The data associated with the 2009 use of e-asTTle were not considered reliable enough to give accurate scores for acceleration and progress overall, but given the analysis of the Optimal Model was from comparisons within Cohort 1 schools, they were used to look at school differences. The Case Study Schools provide rich qualitative data which were used to provide a greater level of detail in the descriptions of the relationships.

The analysis integrates and triangulates the evidence from these multiple sources. Stronger conclusions can be made where there are multiple sources of supporting evidence. Because the analyses of the questionnaire data contain multiple correlations and multiple *t* tests, the results from these need to be treated with considerable caution. Additionally, as the achievement data came from only those students whose initial curriculum levels were at or below 3A, the sample is limited and may not be representative of the whole school's achievement.

Therefore, the emerging Optimal Model should be seen as a whole which is greater than the sum of its parts. Indeed, single dimensions are likely to be necessary conditions (if the evidence suggests this) rather than sufficient conditions for overall effectiveness (Timperley et al., 2007). From this perspective it was an important finding that the inter-correlations between dimensions were generally low and not statistically significant. This means that schools that were high on one or more dimension were not necessarily high on all.

When the overall total score for the questionnaires was used in planned comparisons and schools that had higher achievement were compared with schools with lower achievement, there were no significant differences. This lack of difference may reflect the small sample size or the limited range of student achievement (as only those at 3A or below were included). It may also indicate that the variability between dimensions means that the total score was less reflective of achievement than the individual dimensions.

2.2 Dimensions of the Generic Model

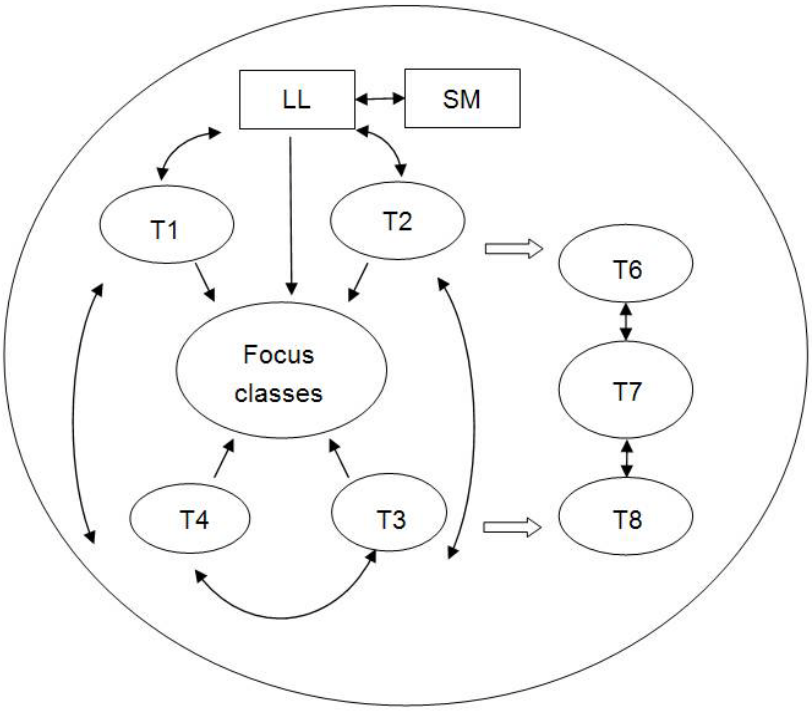
2.2.1 Professional Learning Community Design

This dimension refers to the design of the Focus Group of teachers and particularly its relationships with students, with the LL, with the Senior Management Team and the ongoing relationships between each of the above and the wider staff. This organisation could vary in a variety of ways. Through the three sources of evidence this dimension was refined to two types.

Type A: Student Focus with leadership and planned extension. In one type shown in Figure 3, the Focus Group comprises those teachers who are teaching a common class or classes of students (Focus Class). In this type, the evidence base and the focus of inquiry is specific to that common Focus Class of students and their learning across the content areas represented by the teachers. The analysis of the three data sources suggested that this type typically occurred with two other features so we have built these into this type. The first feature is a dedicated and highly active LL leading the inquiry with the Focus Group teachers, plus strong support by a member of the Senior Management Team: often a Deputy Principal with special responsibilities. The second feature was planned extension to the wider staff through staff meetings and structured PD. This was done in different ways in different schools.

Type B: Other Focus A range of other types are possible and were revealed through the questionnaires. The most frequent other types were teachers being selected to represent content areas (Content Focus), no specific Focus Group but rather all teachers being involved (Staff Focus) or selection of potential leaders (Leadership Focus).

Figure 3: **SLP Optimal Model Dimension 1: Professional Learning Community design. Student Focus Group with LL and Senior Manager and planned extension. Note: LL = Literacy Leader; SM = Senior Management; T1–T4 = Focus Group teachers; T6–T8 = wider staff**



There was evidence supporting the effectiveness of the Student Focus design. The evidence was both quantitative and qualitative. Analysis of the questionnaire data using *t* test comparisons between schools indicated that schools that had the Student Focus design ($n = 10$) versus others ($n = 13$) had higher levels of reading for Māori and Pasifika students than other schools in Year 10 at both the beginning ($t(18) = 3.24$, $p < .001$) and end ($t(18) = 3.23$, $p < .001$) of the year. They also had higher levels for all students in Year 9 at the beginning of the year ($t(21) = 2.27$, $p = .03$) and in Year 10 at the end of the year ($t(19) = 3.51$, $p < .001$). While the gains over each year were not different at these schools, the evidence suggested a relatively robust relationship with levels of achievement. Both HA schools had this design and both LA schools did not.

The analysis of mid-year reports for the Case Study Schools supports this conclusion. Both HA schools had deliberately used the Student Focus design to achieve specific aims. For example, in one school (HA2) it was apparent by Term 2 of 2009 that the whole-staff approach needed to be augmented by a Student Focus design using Focus Groups. The rationale was around the need to have evidence from common students on which to apply and test what was being learned in the PD, to evaluate the programme with an intensive group, and to build expertise in the Focus Group teachers so that the expertise could be rolled out across the school through coaching and other methods. Two Focus Groups were established using the Student Focus design. In both this school and the other higher achievement school (HA1), the reports indicate that the groups of teachers were involved in detailed analysis of the needs of students using both reading and writing.

In the LA1 school the design used was department-based. The mid-year report of LA1 indicated that teachers in two departments comprised the Focus Group. The inquiry process associated with the Focus Groups focused on common issues in their teaching ('processes and strategies') which were skills needed by students in both departments. The participants in LA1 agreed that Focus Group teachers were selected not on the basis of particular students and classes, but on the subject areas they taught. Social studies and science were chosen because one area had strengths in literacy

and the other needed support. In the interview, the LL commented that among social studies and science teachers, teachers were sorted by the classes they taught so they could discuss specific students' needs. This view was not shared by the Focus Group teacher. This could signal an important area of coherence needing development at this school.

In the LA2 school, the LL thought that the Focus Group teachers were chosen based on interest in literacy covering a broad range of departments. However, the Principal believed that Focus Group teachers were targeted as those with low achieving students. The non-Focus Group teacher also believed that a specific group of students were targeted. The inconsistency of views perhaps suggests an area of need for this low achieving school.

The significance of this design would be predicted by the available research evidence from intervention projects such as Te Kotahitanga (Bishop, Berryman, Tiakiwai, & Richardson, 2003) and also effective school reform models (Rowan, Correnti, Miller, & Camburn, 2009). It would also be predicted from the research literature on inquiry and the role of professional learning communities (Lai & McNaughton, 2008; Rowan et al., 2009).

2.2.2 Implementation Level

This dimension was composed of several parameters. Each of these could be predicted from the research literature to be important. The Best Evidence Syntheses of Leadership and of Teacher Professional Learning and Development (Robinson, Hohepa, & Lloyd, 2009; Timperley et al., 2007) indicates that effective PD interventions would have intensity and breadth, would be integrated into the schools' programme and therefore would have high coherence, and would have effective supportive leadership. The parameters below reflect these predictions.

The first parameter was the breadth and intensity of the implementation as judged by frequency of Focus Group sessions, length of Focus Group sessions, frequency of staff sessions and length of whole-staff sessions. The Best Evidence Synthesis of Teacher Professional Learning and Development (Timperley et al., 2007) found that all PD interventions that made a difference for students provided teachers with frequent and varied opportunities for teacher learning over an extended period of time.

Using the Literacy Leader questionnaires, we could not find any evidence for the range of implementations on this dimension being related to levels of achievement or gains. The likely explanation for this was that the majority of schools implemented a relatively intense model. For example, in 20 schools, five or more sessions were held over 2009 with Focus Group teachers, which typically ran for two hours or more. Similarly, the majority of schools had 4 or more sessions with the whole staff which typically lasted between thirty minutes and two hours. The HA schools differed in their scores, with one above (HA2 = 2.20) and one below (HA1 = 1.80) the average rating (M = 2.19). Similarly, the LA schools differed, with one above (LA2 = 2.40) and one below (LA1 = 2.00) the average rating.

Also, as the Best Evidence Synthesis of Teacher Professional Learning and Development (Timperley et al., 2007) found that while time/intensity is a necessary condition, it is no guarantee that a programme will be effective; it is not as important as what happens in the time. This seems to be consistent with the Best Evidence Synthesis in that once a minimum threshold of intensity was achieved, other factors became more important. For example, most participants at HA1 reported in their interviews that SLP was part of several whole-staff meetings. However, the Focus Group teacher pointed out that for one of these meetings, the SLP section was pushed down the agenda and only given 10 minutes at the end.

The second parameter was coherence. This was measured in the questionnaires by perceptions of how well the programme fitted with other interventions and had been integrated into subject areas. While this dimension was not significantly related to achievement in the correlations or *t* tests, an analysis of the qualitative data from Case Study Schools reveals important differences. The coherence ratings for the Case Study Schools were associated with achievement to some extent. HA1 had a score of 2.00 which was close to the average score (2.08), while HA2 had a

higher score (2.50). LA1 had a score that was below average (1.50). However, the pattern was reversed in LA2, which had a higher score (2.50).

The qualitative data from the Case Study Schools more strongly reinforced the claim that this was an important dimension in the level of implementation. At HA1, all participants apart from the Principal believed that the participation in Te Kotahitanga took a higher priority in the school and that it had greater focus because of its higher funding and staff involvement. But the Principal believed that the SLP complemented the content and pedagogy of Te Kotahitanga. At HA2, however, the participants explained that SLP was carefully integrated with other programmes by the Principal, which is reflected in the difference in coherence ratings between this school and HA1. The Principal of HA2 stressed that she saw SLP as the main PD focus for the school.

At LA1, participants also believed that SLP fitted in well with other programmes, including Te Kotahitanga and a previous literacy intervention. However, the coherence rating score from the LL survey was lower, indicating that the LL's view differed. At LA2, the LL and non-Focus Group teacher both believed other unrelated programmes were distractions from SLP that competed for its time.

Implementing two major PD interventions such as SLP and Te Kotahitanga at the same time is challenging, particularly when levels of resourcing and profile in the school differ so markedly. HA2 had a high coherence score in the LL survey and this was supported by qualitative evidence from the interviews. While SLP is not the only intervention HA2 was involved in, it was clearly positioned as the central overriding project, and this explains the high level of coherence. In the other Case Study Schools, Te Kotahitanga was seen as the higher priority, and this is the main explanation for their relatively lower coherence scores. This suggests, perhaps unsurprisingly, that schools should be careful about taking on two major interventions at the same time.

While participants at LA1 reported links being made between the two projects, the different view expressed by the LL in the survey shows that this is far from simple to achieve in practice. Given similarities between the projects, for example in goals and structure, it seems likely that synergies could, and should, be created. However, the research completed so far suggests that achieving such coherence may be more difficult than it seems. More detailed investigation about factors that constrain and enable schools to cope with two major interventions at the same time is needed.

The third parameter was school leadership support. This was measured by ratings relating to how Focus Groups were released or covered in schools, the status given to the LL, meetings with the Senior Management Team and the commitment of the Senior Management Team. There was no evidence from the statistical analysis of the questionnaires that ratings were in general related to achievement. However, the Case Study Schools differed both in terms of the ratings and in the qualitative evidence from interviews. In the two HA schools the ratings for leadership were around or above average (M = 2.19; HA1 = 2.20; HA2 = 2.80) while this rating was below average for LA1 (2.00) and around average for LA2 (2.20).

At both LA1 and LA2, the LL explained that there was an initial lack of leadership support. For example, at LA1 the SLP funding allowed for release for Focus Group teachers, but the LL explained that although release was given, Focus Group teachers had to repay this by providing equivalent release to other teachers. Patterns across the HA schools were mixed. At HA1, the LL and Focus Group teacher both believed that there was not enough support from the Senior Management Team. However, in HA2, the Principal saw such value in SLP that she insisted on a school-wide approach and attended all workshops and hui. The LL agreed that the Senior Management Team was supporting the SLP programme. There is an important connection here with the Best Evidence Synthesis of Leadership (Robinson et al.,

2009) which identified 'promoting and participating in teacher learning and development' as the most influential leadership dimension in improving student outcomes.

2.2.3 Inquiry

The third dimension was concerned with inquiry about teaching. Specifically this tapped the level and potential informativeness of the inquiry as part of teacher professional learning in the schools. The LLs answered questions about how many Focus Group teachers they had observed and how many total observations and feedback sessions they had conducted. Surprisingly, inquiry was negatively related to achievement: Schools that had higher inquiry scores had lower achievement for Year 10 Māori and Pasifika students in terms of gains across the year (r = -.48) and scores at the end of the year (r = -.51). The latter was also significant in planned comparisons ($t(18) = 2.17$, p =.04).

Reflecting this, the LA1 school had a high score on inquiry (3.00), while the HA schools had medium to high scores (HA1 = 2.33; HA2 = 2.00). LA2 went against this pattern with a medium score (2.00), indicating that this tendency was not universal. The interview data provide an insight into the differences. The LL at LA1 explained that she conducted observations depending on each teacher's need. Perhaps at lower achieving schools, the need for inquiry into teachers' practices is greater. It is also the case that inquiry that does not have an appropriate focus or is not well informed by a clear focus may not add value.

These possibilities were checked further in the questionnaires. Schools differed in whether the LL saw their role as involving inquiring into student achievement or not. A t test comparison revealed no significant differences in achievement between these two types of schools. However, the interview data revealed qualitative differences. The HA schools both described an emphasis on inquiry into student achievement, including examining achievement results individually for every student in the school (HA1) and explaining e-asTTle results in depth to students (HA2). The LA1 school, on the other hand, did not have as specific a focus on student learning and achievement, instead basing their focus on inquiry into teaching, or on PD that provided generic strategies without specific rationale.

2.2.4 Content: Student Focus

From the questionnaires it was apparent that schools differed on whether they had adopted the SLP guidelines and had a specific focus on Māori and Pasifika students. By default, given that the analysis was restricted to students scoring 3A and below, the students in the statistical analysis were relatively low achieving. Nevertheless, there were some differences between schools. Almost all school targeted 'all' students, however, LLs at eight schools identified Māori and Pasifika students as the specific focus. But this difference, tested in a number of ways, was not statistically related to achievement outcomes. The Case Study Schools differed in their ratings for the one questionnaire item that was quantitatively coded (which asked whether the school followed the SLP guidelines). The two HA schools had high scores (3) while the LA schools both had a lower score (2) based on the response that the LL had focussed on specific needs rather than those provided in the SLP guidelines. The median rating for this item was 3.

In the HA1 school there had come to be a deliberate focus on Māori students. The LL had chosen to focus on classes with the most Māori students. The Principal, Focus Group and non-Focus Group teacher each commented that the focus was on Year 9 and 10 students in general, with a shift to focusing on Māori students in particular due to their achievement levels and the increasing proportion of Māori students in the school. In contrast, at LA1 there was not a shared view of the student focus. The LL saw Māori and Pasifika Year 9 and 10 students as the focus. However, the other participants did not refer to a particular focus, or said that it was Year 9 and 10 students in general.

2.3 The Optimal Model

2.3.1 Summary

The most effective model that emerges from these data is one that has a core design focused on common students, where the Focus Group teachers have considerable guidance and professional input from the LL, and at least one member of the Senior Management Team is an active and dedicated supporter. The PD has high intensity and breadth in the sense of having frequent sessions and planned extension to the whole staff. Inquiry processes which are evidence-based are focused on these students, within the context of an overarching concern for Māori and Pasifika students' achievement. In this model, SLP tended to have high coherence with the core programme in the school and other intervention programmes.

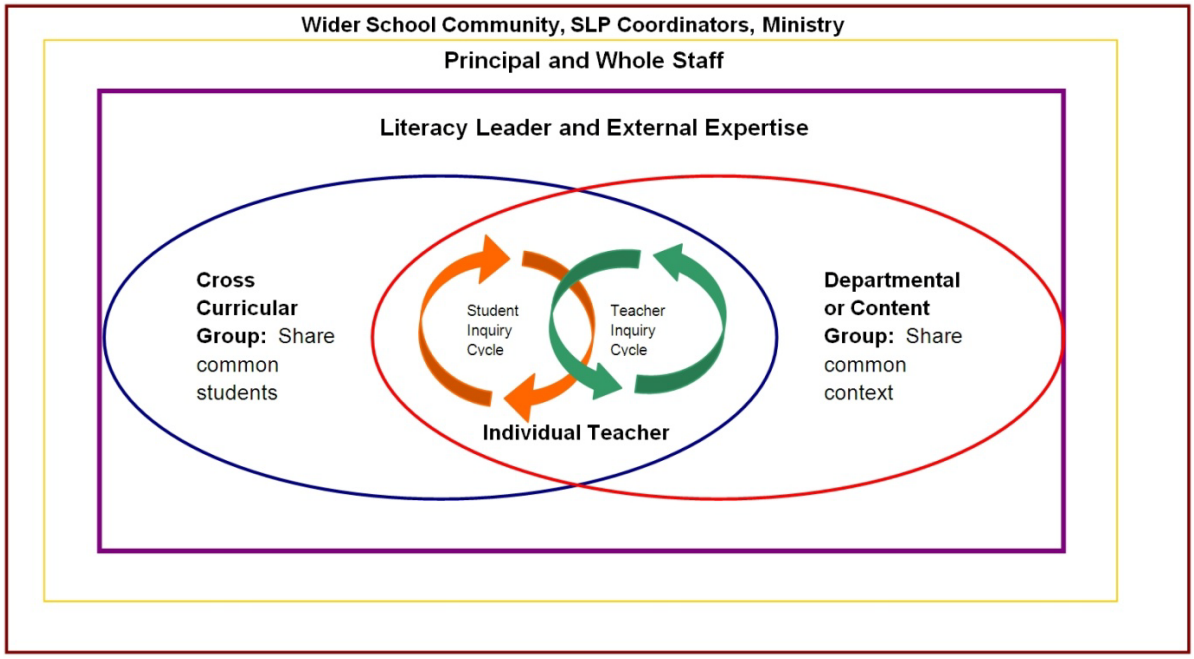
Using these mixed results, we examined the wider literature further to elaborate upon the dimensions that had emerged in the implementation. The Optimal Model for the implementation of the SLP would have at its heart the interlinked inquiry of students and teachers. For both parties to progress in literacy teaching and learning, their inquiry cycles need to intersect for analysis and evaluation. Both inquiry models need to be based on multiple sources of relevant data that can be interrogated effectively by teachers.

These inquiry cycles need to be supported by professional learning communities (PLCs) that overlap. Teachers with a shared interest in common students form a cross-curricular PLC. They each take what they discuss and learn to their departmental meetings. In these content-specific PLCs, teachers discuss how to implement strategies effectively within their own context, with the support of others who 'speak their own language'. These PLCs then have a responsibility to share with the wider staff to ensure cohesion and further opportunities to interact with this new knowledge.

Time is important to this process and this is why the leadership needs to be strong, visionary and able to allocate resources effectively to ensure a comprehensive school-wide adoption of the initiatives. The Optimal Model recommends Senior Management be given literacy leadership roles, but at a minimum, strong leadership and support must come from the Principal and Senior Management to hold staff accountable for the overall implementation and producing positive outcomes for all students.

Sustaining these efforts requires a collaborative effort, not only within the staff but between all members of the school community. The intersecting patterns for inquiry with various PLCs are shown in Figure 4.

Figure 4: Inquiry cycles in professional learning communities



2.3.2 Leadership

This dimension looks at the types and levels of leadership that are required to ensure the process is implemented and sustained for the school and its community.

Leaders need to have a vision of what the successful implementation of a school-wide literacy focus would look like in their school, and be able to articulate that to staff whilst motivating them to see it accomplished (Irvin, Meltzer, & Dukes, 2007; Timperley et al., 2007). A climate of teacher learning needs to be fostered within the school and lead strongly enough to hold teachers accountable for implementation and include the induction of new staff (Irvin et al., 2007; Lai, McNaughton, Amituanai-Toloa, Turner, & Hsiao, 2009; Timperley et al., 2007). “Leaders have an active role to play in re-culturing their schools so that they become evidence-informed” (Timperley et al., 2007 p. 225). Strong engaged leaders are required to support their teachers by understanding what is required and encouraging them to make the required changes in order to effect change resulting in improved student outcomes (Irvin et al., 2007; Strong, 2010; Timperley et al., 2007; Wilson, 2009).

Reed (2009) found that without a school-wide initiative to implement strategies, there was no active promotion or shared strategy enforced to provide a cohesive approach across the curriculum areas. While Irvin et al. (2007) promote the Principal as the ‘instructional leader’, they feel the responsibilities should not be given to one person alone but shared with a ‘literacy team’ or management team, building on leadership qualities within the staff. Ronka, Lachat, Slaughter, & Meltzer (2008) indicate that Principals and other school leaders, along with broad representation from across the school (levels and subjects) should make up the PLC. “When educators assume responsibility and become accountable for the educational programs they initiate, they gain confidence in their ability to bring about change in education” (Hinds & Berger, 2010, p. 89).

This form of educational leadership in SLP may take the form of an initial discussion with the faculty about what SLP would look like if it was successful in their school. Responses from teachers about what they think they might be doing, or what their students might be doing and what the school environment might be like, would be kept and used as indicators for progress and a guide for implementation (Irvin et al., 2007). This forum would be revisited and progress would be reported in whole-staff meetings so that successes can be celebrated and stumbling blocks recognised and resolved.

SLP also recognises that while the Principal would need to have their finger on the pulse of the overall picture for literacy in their schools, they would need to depend on their Senior Management, heads of department and LLs for the more detailed picture. In an optimal implementation of SLP, regular meetings with and between these vital sources of information would help ensure the Principal and Senior Management are able to be proactive rather than reactive to issues raised.

Literacy Leaders Supported by Senior Management

The SLP LL role in schools is seen as pivotal in linking the PD gained from external experts, specifically LFs, with the schools' unique context and staff (Wilson, 2009). The use of school-based LLs or 'specialist teachers' is seen across the research literature as a recurring successful condition for effective Literacy Professional Development in secondary schools, resulting in positive outcomes for students (Baldwin, 2008; Strong, 2010, Timperley et al., 2007; Whitehead, 2010). Irvin et al. (2007) discuss Principals distributing leadership to LLs. The LLs form a literacy team which assists with the implementation of the school-wide literacy improvement goals. Here the key roles of the literacy team converge with those of the LLs from the SLP model (Wilson, 2009). Strong (2010) recommends senior teachers hold literacy leadership positions, as they have the authority to implement change. While this may be an ideal, it may not be practical, so the emphasis must be on a knowledgeable, supportive and heavily involved senior leadership team.

The LL in an optimal SLP school would have the skills and knowledge required to gather, analyse and interpret student data, understand the next teaching steps across the curriculum and have a sufficiently wide knowledge of effective literacy pedagogy to assist staff with implementation through observation, feedback, modelling, and running focused PD sessions with the various PLCs.

The relationship between the LL and Senior Management is a vital part of optimal SLP implementation, as the LL needs to be respected and seen to be able to make things happen. This can be through their role's ability to effect change or through their relationship with Senior Management who listen and act accordingly. Without respect, strong and open relationships, and opportunities to meet as needed in order to produce proactive interventions, the SLP would be seen as unsuccessful, limited or no teacher engagement would result and the project would collapse.

SLP also calls for the involvement of external expertise in the form of LFs. For this to be effective the LL needs to facilitate the interactions and relationship of the school with this expertise. In an optimal SLP school the LL would be the link between the expertise and the school, ensuring open communication and requesting further assistance and face to face time as required.

2.3.3 Professional Learning Community Design

Research has proven the benefits of PLCs. It is this cooperation that is helping teachers to gain confidence in their efficacy and in turn impact positively upon their students (Cantrell & Hughes, 2008). Wilson (2009) used Focus Groups as the collegial support or PLCs in the SLP with links to the wider staff, using an inquiry and knowledge building approach to determine the effectiveness of their PD based on evidence (Baldwin, 2008; Hinds & Berger, 2010; Irvin et al., 2007; Lai et al., 2009; Thibodeau, 2008; Whitehead, 2010). The Ministry of Education (2007) promotes teachers using an inquiry cycle, to inform their practice as a form of effective pedagogy as various strategies work differently for diverse students and contexts.

Evidence supports the use of a student focus for the basis of any PLC and the use of cross-curricular groupings that have a shared interest in common students (McNaughton, 2010; Ronka et al., 2008; Timperley et al., 2007). This means that the teachers involved have a class or number of classes in common, forming data they can interrogate together that is relevant to all members of the group. Allowing the group to work together on common goals for common students

gives the process more cohesion; for example, having agreed instructional language for literacy avoids student confusion about terminology on commonalities, such as paragraph starter sentences or particular writing structures.

Strong (2010) found that if schools split the specialist teacher role between two teachers from different areas, it assisted in breaking down barriers especially for more resistant teachers, as they could see someone in a leadership position that 'spoke their language'. This supports the use of content specific groupings to share literacy strategies that work within their own content in tandem with the cross-curricular groupings, so that they complement each other (Timperley et al., 2007). Thibodeau (2008) describes a situation where members of a cross-curricular group report back to their departments about what they are doing and sharing their new knowledge. The group also reports to the whole staff during staff meetings. The Optimal Model supports this idea as content area teachers know their subjects and are more likely to be able to recognise what strategies will work in their area successfully. Working in this complementary way allows each group to achieve the same goal while working with a different purpose/focus. Cross-curricular groups work more with a focus on students, whereas departmental groupings tend to offer focus that is more content specific, but both aim for the same goal of improved student outcomes.

Some form of external expertise is required to offer challenge to the 'status quo' and to assist in the extension of theoretical knowledge and its translation into practice, as any new practice is going to differ from what the teacher already has in place (Cantrell & Hughes, 2008; Thibodeau, 2008). New understandings and skills need to be strongly grounded in specific theoretical principles (Lai et al., 2009). PD providers have the difficult task of trying to communicate their message in a way that makes sense to teachers. This communication process involves interaction between the teachers' prior knowledge, the teachers' context and the providers' message (Lai et al., 2009). Reed (2009) researched four studies of PD and the implementation of literacy strategies in a middle school context, and found that successful PD was relevant to teachers, frequently job-embedded and ongoing (Thibodeau, 2008). Zakierski & Siegel (2010) found that using the experts as a resource for teachers to see lessons and activities modelled assisted their integration of the intervention (Cantrell & Hughes, 2008).

Evidence supports the expansion of the successful model to include wider staff through staff meetings and structured PD (Thibodeau, 2008; Whitehead, 2010). In the absence of a school-wide integrated approach to improving literacy outcomes for students these types of initiatives will not be sustainable or successful (Reed, 2009).

Evidence supports extending the literacy programme to include the wider school community. Zakierski & Siegel (2010) describe a situation where parents and the wider community complemented the efforts of the teachers by working with students outside of the school environment to encourage literacy practices. There is strong evidence to support positive home-school relationships in promoting positive outcomes for students (Zakierski & Siegel, 2010).

PLCs in an optimal SLP school would be formed firstly on the basis of commonly taught classes for a cross-curricular group of teachers. The second basis for grouping would then be linked to a departmental learning community. This would mean that a maths teacher would be involved in their maths department learning community and a cross-curricular learning community. Each group while focusing on literacy would be looking at it from a slightly different angle, but overall each would support the school-wide initiative. Breaking into small Focus Groups allows for more detailed data interrogation that is relevant to all group members.

PLCs would be supported by both the LL and external expertise and would report regularly to the whole-staff PLC, where ideas would be shared, discussed and analysed to assist in the cohesive implementation of the initiative. Some research has also mentioned the advantages of including the librarian and media teachers, as they bring a raft of knowledge and resources that can be made accessible in a number of ways (Irvin et al., 2007; Zakierski & Siegel, 2010).

To reinforce the efforts made by teachers, in an optimal SLP school, the wider school community would be aware of the initiatives and encouraged to be proactive in supporting literacy outside of the school environment through strong home-school communication and other initiatives (Irvin et al., 2007; Zakierski & Siegel, 2010).

2.3.4 Implementation Level

What is seen as important is how time and funding are used to maximise opportunities for PD (Irvin et al., 2007; Timperley et al., 2007). Ronka et al. (2008) found that effective data analysis assisted leaders in targeting additional resources and that time is required for collaborative analysis periodically during the school year to make this happen.

Alignment of the content, instructional strategies and assessment techniques was a required condition so that PD could have a positive impact on student outcomes (Irvin et al., 2007; Timperley et al., 2007). Timperley et al. (2007) found that for wider 'gaps' a longer time period is seen as advantageous, along with frequent contact with the professional community or involvement in collegial relationships (Reed, 2009).

For secondary school interventions to be effective they need to be aligned with current research findings and policy contexts. Additionally, all of the PD must be implemented across the school to reduce conflicting practices/pedagogies (Irvin et al., 2007; Timperley et al., 2007).

Evidence supports sessions for the PLC that are frequent and of a time frame that is sufficient to 'interrogate' the data, but they alone will not result in improved outcomes for students (Irvin et al., 2007; McNaughton, 2010; Timperley et al., 2007). Teachers, like their students, require multiple opportunities to learn and experience new knowledge over an extended time frame. What happens in the allotted time is more important than the length of time (Timperley et al., 2007).

The implementation in each optimal SLP school will vary slightly due to their individual context, but will hold the following conditions. Each PLC will need to schedule regular meetings that are of sufficient length to allow them the time to 'interrogate' data sufficiently so that they can decide on the next steps to take, time to discuss and clarify ideas and time to share anecdotal evidence and issues that need to be raised and dealt with. Giving teachers opportunities to interact with these ideas in multiple settings, including cross-curricular, departmental and whole-staff PLCs, will support their learning of and engagement with new ideas.

If the content is aligned, as would be expected in an optimal SLP school, then there would be evidence of the strategies in classrooms that align with content. If a science teacher is working with their students on experiments they will use the opportunity to improve the procedural reading and writing of their students during the lesson, by giving examples of well written experiments and expecting students to write up experiments following the correct guidelines. This allows for the literacy skills to be taught but not at the expense of the content knowledge.

School Leaders should play a role in ensuring that the latest policies and practices are available to staff. Their relationship with the LL would facilitate this and resolve any arising issues surrounding resourcing for the initiative.

2.3.5 Inquiry

Inquiry needs to be evidence-driven using a range of data sources. Evidence supports the use of an inquiry model that looks firstly at what the students need to know, to inform the inquiry into what the teachers need to know. The inquiry cycle must be twofold as the inquiry into students' needs asks how teachers can close the gaps in their students' knowledge, which leads to the question of what teachers need to know in order to achieve that aim. This in turn drives the inquiry cycle for teachers to ensure that any PD they undertake is focused on delivering positive outcomes for students.

While the literature compels teachers to use multiple sources of assessment information to inform their use of the inquiry cycle, there is little detail about how to select the correct assessment tool or how to analyse the data, other than emphasising the importance of disaggregation of the data to avoid marginalisation of any child or group (Timperley et al., 2007; Irvin et al., 2007). Zakierski & Siegel (2010) note the importance of teachers learning how use a variety of assessment tools effectively and efficiently as part of their PD (Ronka et al., 2008). The SLP uses e-asTTle testing across the participating schools as one comparable assessment tool, so results can be studied. Opportunities for teachers to gain knowledge of how to use the relevant assessment tools was also part of their Literacy Professional Development (Wilson, 2009). Ronka et al. (2008) support the use of a common protocol for testing as it makes tracking student progress easier. Considering the increased availability and variety of data available, the Education Review Office found that "many schools still need help in developing school-wide assessment policies, procedures and practices across all aspects of students' learning" (Education Review Office, 2007, p. 26; Ronka et al., 2008).

For the implementation of SLP to be optimal, the assessment literacy of all teachers would need to be raised. For this reason it is essential that the LL has expertise in data interrogation and analysis, as they lead the process at the detailed level. In addition to this knowledge LLs would need to have a detailed understanding of student needs as well knowledge about what would need to be changed in the teaching in order to address specific needs. PD would need to be targeted to acknowledge teachers' current thinking with the goal of moving them towards best practice in the use of data for the purpose of informing teaching and learning.

2.3.6 Content: Student Focus

For SLP to be successful the heart of the project needs to have a student focus. What are their needs? What can teachers do to effectively to enhance student outcomes? There is no use teaching students what they already know and are proficient at. The aim is to decipher from the evidence what gaps they have and analyse where to next.

The SLP asked schools to focus on the progress of their Māori and Pasifika students (Wilson, 2009). If the inquiry is based on multiple sources of evidence, the resulting culturally responsive teaching should be differentiated in order to meet the needs of all students. However, by default if the PLCs have a particular focus on low achieving students or minority groups then the expected outcomes should promote significant increases for these groups, while also including gains across the student population.

2.3.7 General Barriers and Constraints

Research tells us that without a complex interaction of the Optimal Model dimensions, sustainable improvements will not be possible (Irvin et al., 2007; Timperley et al., 2007; Whitehead, 2010). Some barriers or constraints from the research include but are not limited to the following conditions. Expertise in assessment literacy is essential to inquiry at the heart of the Optimal Model, so without it the process would not be reliable or valid. To this end the LLs are required to be experts in assessment literacy in order to drive the inquiry process. If the leadership in the school does not see the vision for literacy initiatives and their impact on students the resourcing, time and accountability required to ensure sustainability will not be made available (Irvin et al., 2007). Research indicates that a lack of effective PD based on research and theory will not produce effective changes in practice and will not improve or promote teacher engagement (Timperley et al., 2007).

PD providers should ensure that their interventions are valid, based on research and theory, have proven success with improving student outcomes and are responsive to teachers' needs. However, currently checks on these features are not in place, and these need to be implemented to assist school leaders in making choices that benefit teachers, students and the bottom line. Further research into what makes for effective PD providers is needed (Timperley et al., 2007).

Specific Constraints and Enablers for an SLP Optimal Model

In addition to these barriers indicated from the general research base, the various sources of evidence we have collected mean we can identify a number of constraints specifically on the effectiveness of SLP. These are primarily perceptions of LLs, but through the Case Study Schools also include Principals, teachers (both Focus Group and non-Focus Group) and other Senior Management staff. The constraints and insights can be summarised in the following areas.

1. Status, Recognition and Resourcing for LLs
   The need to have an appropriately resourced position as LL was expressed in a number of ways. Different schools created and funded the position differently. These ranged from release (non-contact time) to reconfiguration of an existing position to take on the role. Within the Literacy Leader questionnaires, roughly half responded that barriers included school leaders having not enough time and having other priorities.

   The interview analysis revealed further constraints of funding and resources. For example, at HA1, all respondents but the Principal commented that having less funding and resources than other programmes (specifically referring to Te Kotahitanga) led to a reduced focus on SLP. At LA1, a lack of funding and resources was also cited as a constraint. The Principal commented that he would give more funding if it were available, and the LL explained that although release was given to Focus Group teachers to attend meetings, it had to be repaid by trading release times with other teachers.

2. Full Expertise as the Leader of Inquiry
   One questionnaire item asked LLs about their selection in terms of their own knowledge. We examined the relationship between achievement patterns and self-rated levels of having been selected because of knowledge using planned comparisons. The results appeared to be random (there were both negative and positive relationships with achievement). All LLs in the Case Study Schools saw themselves as being selected for a wide variety of reasons, including because of their knowledge. In the questionnaires we found that while LLs tended to rate their knowledge of effective practices in adolescent literacy highly, they were less positive about using evidence to identify and prioritise needs (13 LLs rated themselves as confident and 9 rated themselves as not very confident). Similarly, LLs were less positive about being able to challenge Focus Group practices (12 rated themselves as not very confident) but they did feel more able to maintain effective relationships (22 rated themselves as confident or very confident). The implication is that the role of LL is complex, requiring expertise in a number of areas. The issue of the development and ongoing support of these areas of expertise may be a constraint.

2.3.8 Fine-Tuning Implementation in 2010

The major findings and promising directions from the 2009 evidence were fed back to Cohort 1 and Cohort 2 schools at the beginning of 2010. Specific emphases (and guidelines) were identified for schools to:

- Increase levels of intensity of implementation
- Increase degree of coherence in specific areas, and specifically position SLP as central with which other interventions should be deliberately integrated
- Increase leadership support
- Focus inquiry on specific evidence to do with learning and achievement, and specifically for Māori and Pasifika students
- Build the expertise of the LLs
- Employ Focus Class organisation more widely.

The results from 2009 suggested that for LFs there was considerable variation across regions in the facilitation provided to schools around these six areas. Implementation in Cohort 1 and Cohort 2 schools could be compared directly against these evidence-based directions. In the following chapter, we present evidence from 2010 for implementation across different levels in the cascading model and, where possible, compare the implementation between 2010 and 2009 for evidence that the SLP shifted in its implementation further towards the Optimal Model.

3. Facilitation and School Implementation in 2010

The descriptions and analyses reported in this chapter answer two questions about the implementation. The first is whether in 2010 the implementation shifted towards the Optimal Model described in the previous chapter. The second was whether the implementation was related to student achievement outcomes. Each of these two questions is investigated in relation to implementation at the LF level and the LL level. Note that the latter question could not be answered either positively or negatively with any assurance given the problems that we confronted with the e-asTTle tool in 2009. Because of this we can only examine with confidence possible relationships with achievement in 2010 as measured by the e-asTTle tool.

3.1 Literacy Facilitator Implementation

In 2010 we designed a specific questionnaire for Literacy Facilitators (LFs) to probe their perceptions of implementation at their schools. A total of 44 Literacy Facilitator questionnaires were received, but 1 was filled out by a school's Literacy Leader (LL) by mistake. The analysis of Literacy Facilitator questionnaires was therefore based on 43 questionnaires from LFs from the six regions. Note that LFs did not fill out a questionnaire for every school in their region. Table 3 shows how many of the 60 schools had questionnaires filled out by their LFs.

Table 3: Number of Schools by Region with Literacy Facilitator Questionnaires Returned

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
Frequency	14	8	4	5	8	4	43

3.1.1 Overall Results: Themes

The questionnaire contains 22 questions. Following the 2009 analysis of dimensions (Appendix E), these questions were categorised into themes for the analysis. The themes and the questions used to create the index (i.e., mean scores out of the questions for that theme) for the themes are contained in Appendix F.

Table 4 shows the overall summary statistics of each theme by all LFs. For all the themes, the mean and median scores were all between 3 and 4 (of a 5 point scale), which were equivalent to between 'meet the expectation' to 'above expectation' or between 'average' and 'precisely'.

Table 4: Overall Literacy Facilitators Questionnaire Summary Statistics by Themes

Theme	N	M	SD	Mdn	Min	Max
Facilitator School Support Services	43	3.77	0.39	3.75	3.00	4.50
Leadership	43	3.29	0.65	3.50	2.00	4.50
PLC Focus Group	42	3.17	0.59	3.00	2.00	4.50
PLCs Whole Staff	41	3.05	1.16	3.00	1.00	5.00
Inquiry in Teacher	43	3.57	0.54	3.50	2.50	4.50
Inquiry in Student	43	3.98	.831	4.00	2.00	5.00
Māori and Pasifika Student Focus	43	3.26	0.70	3.10	1.70	5.00
Intensity	43	3.43	0.34	3.38	2.75	4.13

3.1.2 Question One: Shifts in Implementation Towards the Optimal Model

Direct comparisons with LFs' perceptions of features of the implementation between 2009 and 2010 are not possible. However, limited comparisons are possible from the range of tools that were employed in 2009 including the progress reports.

Employ Student Focus Class organisation

The degree to which Focus Class organisation was employed was not asked directly of LFs. It is addressed below in a separate series of analyses from the LLs' evidence.

Maintain high levels of intensity

Levels of intensity were at or above what could be reasonably expected as reported by most LFs (*M* = 3.43 where 3 = expected).

Increase degree of coherence in specific areas, and specifically position SLP as central with which other interventions should be deliberately integrated

One question (Question 10) addressed this dimension of coherence. The LFs reported that the degree of coherence with other programmes was about what could be reasonably expected (*Mdn* = 3).

Increase roles and commitments of leadership

The LFs' responses to the series of questions about Leadership on the schools indicated that the level of support was about what could be expected (*Mdn* = 3). There was however a wide range of responses from ratings of 2.00 (less than what could be reasonably expected) to 4.50. From the LFs' perspective, therefore, there was less consistency than might be desirable in leadership support for SLP.

Focus inquiry on specific evidence to do with learning and achievement, and specifically for Māori and Pasifika students and their underachievement

The LFs reported that their schools were meeting the expectation to focus on Māori and Pasifika students (*M* = 3.26 where 3 = expected). LFs reported high levels of focus on Māori and Pasifika students in their Focus Group meetings. They also reported that the LLs had a high level of understanding of the achievement of and impact of literacy teaching on Māori and Pasifika students. There was a small amount of regional variation in the LF judgements of their schools (range 2.85–3.48). This suggested less variation than in 2009, where no schools reported that their focus was specifically on low achievement and Māori and Pasifika students. It appeared that the process of feeding back through the implementation model had increased this focus.

Build the expertise of the Literacy Leaders

Several questions asked the LFs to rate the LLs' knowledge around the relationship between literacy teaching and achievement. These were mostly part of the previous theme (Māori and Pasifika focus). Individual questions (Questions 14, 15 and 16) yielded a mean rating of *M* = 3.86 where 1 = 'very little' and 5 = 'very precisely'. LFs rated LLs as above expected levels, as knowing 'precisely' rather than having average knowledge.

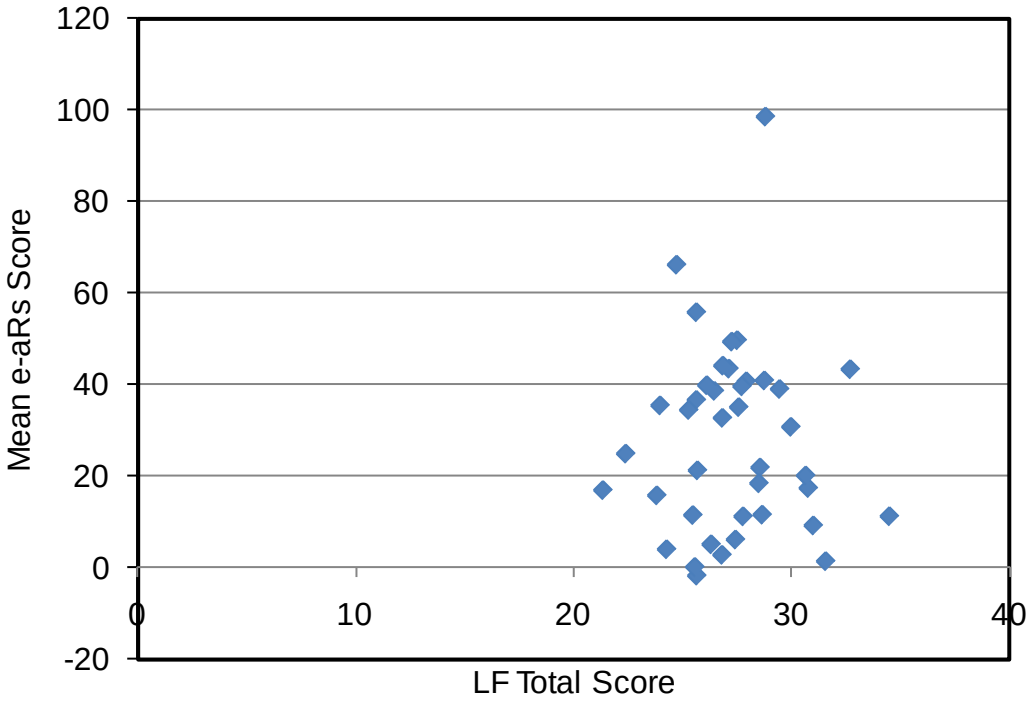
3.1.3 Question Two: Relationship between Implementation and Achievement

We probed the association between the LFs' evaluations of schools' implementations with student achievement.

Figure 5 plots the total LF scores against the schools' Year 9 mean e-aRs scores for all schools that had both the Literacy Facilitator questionnaires and pre-post achievement data. There was no distinct pattern between the LF scores and the mean e-aRs scores and the range of scores precluded more detailed analyses. Appendix E contains the summary statistics of all questions in the Literacy Facilitator questionnaire for 2009 and Appendix F contains the results of the Literacy Facilitator questionnaire for 2010.

It appears that the LFs' reporting on implementation was not systematically related to student outcomes. There are at least two interpretations of this: firstly, the dimensions rated are not related to achievement; and secondly, the dimensions are related to achievement, but most schools were implementing as reasonably as could be expected (judging by their total scores) and limited implementation variability was not influencing outcomes.

Figure 5: Total LF score plotted against school's mean e-aRs score



3.2 Literacy Leaders Implementation

A total of 32 LLs filled out and returned questionnaires in 2010; slightly more than half of the 59 who received questionnaires. One filled out a Literacy Facilitator questionnaire by mistake, so it should be noted that the analysis of Literacy Leader questionnaires was based on 31 questionnaires from the six regions. Table 5 shows how many schools had questionnaires completed by their LLs by region.

Table 5: Number of Schools that had Literacy Leader Questionnaires Returned

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
Frequency	9	4	3	6	4	5	31

The questionnaire contains 54 questions which were categorised into nine themes for the analysis. The nine themes and the questions used to create the index (i.e., mean scores out of the questions for that theme) for the themes are contained in Appendix G. Note that there was some overlap: The questions coded in Intensity were also each coded into one other theme. Questions 1–6 and 51–53 were not coded into any theme.

3.2.1 Overall Results: Themes

Table 6 shows the overall summary statistics of each theme. Each of these questions were on a scale of 1 to 5, where 1 indicates low implementation and 5 indicates high implementation. Means were highest for the theme Facilitator School Support Services and lowest for Professional Learning Communities (PLCs) Department. Results by region and by individual question are presented in Appendix H.

Table 6: Overall Literacy Leaders Questionnaire Summary Statistics by Theme

Theme	N	M	SD	Mdn	Min	Max
Facilitator School Support Services	31	3.81	0.41	4.00	2.67	4.40
Leadership	31	2.62	0.49	2.60	1.75	3.60
PLC Focus Group	31	2.71	0.42	2.50	1.50	3.50
PLCs Whole Staff	31	2.40	0.64	2.50	1.00	3.50
PLCs Department	29	1.62	0.52	1.50	1.00	2.75
Inquiry in Teacher	31	2.85	0.60	2.67	1.83	4.50
Inquiry in Student	31	3.14	0.51	3.25	1.75	4.25
Māori and Pasifika Student Focus	31	3.45	0.70	3.38	1.88	4.80
Intensity	31	2.53	0.38	2.52	1.96	3.68

3.2.2 Question One: Shifts in Implementation Towards the Optimal Model

A limited comparison between elements of the Optimal Model of implementation can be made between LLs' responses to questionnaires in 2009 and 2010, given that some items on the questionnaires of LLs were the same and other differed. Also only Cohort 1 schools are represented in the 2009 data, while both Cohort 1 and Cohort 2 schools provided the 2010 data. The results are shown in Table 7.

The limited comparisons suggest that the levels of implementation increased in specific areas. There was greater implementation of Focus Group and a 50% increase in Inquiry as indexed by observations and feedback sessions with teachers in general as well as with Focus Group teachers. There was evidence of an increased focus on Māori and Pasifika students from 2009 to 2010 and the Focus Class organisational structure was more widely adopted by schools. The implementation, however, appears not to have changed in the degree of Coherence with other programmes in the schools, nor in Intensity.

Table 7: Literacy Leader Descriptions of Dimensions in Their Schools in 2009 and 2010: Means and Medians per School

	2009 (n = 30 schools)				2010 (n = 60 schools)			
Dimension	**Sessions**	**Schools**	**Hours**	**Rating**	**Sessions**	**Schools**	**Hours**	**Rating**
Intensity								
Focus Group workshops	8 x 3 gps x 2 hours		48		8 x 3 gps x 2 hours		48	
Whole staff	4 x 1 hour		4		4 x 1 hour		4	
Coherence								
Integration level				‘mixed’ a				3 b
Leadership								
Core HODs	N/A c		N/A c		1-2 x 4 HODs		4	
Principal / SMT	5 d x 15 minutes		1-2		4 x 4 terms x 15 minutes		4	
Inquiry								
Teacher observations	10 x 1 hour		10		15 x 1 hour		15	
Feedback	10 x 1 hour		10		15 x 1 hour		15	
Focus Group teacher mean (obs feedback)	1 plus 1 e				2 plus 2			
Māori / Pasifika focus		8 (35%)		N/A		28 (47%)		3.4 b
Student Focus Class		10 (43%)				44 (73%)		

[a] Responses included ‘fully integrated’, ‘mixed connections’ and ‘operates independently’ from other programmes; most LLs responded ‘mixed connections’.

[b] On a scale of 1–5.

[c] LLs were not questioned directly about Core HODs in 2009.

[d] Estimate.

[e] Each focus group teacher received 1 observation and 1 feedback session.

Whether the expertise of LLs (self-evaluated) had increased was not assessed directly. In 2010 the LLs rated their knowledge of patterns of student achievement and progress for Māori and for Pasifika students as 4 (on a five-point scale), although the LFs rated the knowledge lower for Pasifika students (*Mdn* = 3). This indicates that LFs were less confident than LLs ‘on the ground’ in knowing how to affect changes for underachieving Māori and Pasifika students. LLs in 2009 answered the more general question of confidence in knowledge of adolescent literacy development generally as being “confident” (2 on a three-point scale). The LLs in 2010 rated their knowledge of how teaching affected student achievement and progress as a median of 4 (on a five-point scale) for both Māori and Pasifika students. Again LFs rated their knowledge lower for both Māori and Pasifika students (*Mdn* = 3). In 2009 the more general question about confidence in using evidence for prioritising teaching needs was rated by LLs as a median of “confident”. But in almost half the schools (*n* = 11, or 42%), LLs were “not very confident” or “not at all confident”. Overall, there is some indication that LLs felt they knew more or were more confident in 2010 about their knowledge, and up to half of these had been asked in both 2009 and 2010.

3.2.3 Question Two: Relationship Between Implementation and Achievement (2009)

As we reported in the previous chapter, various analyses in 2009 of relationships between implementation dimensions and achievement were completed. These indicated no systematic relationships for the overall total scores and for separate analyses for each dimension, either with all students or with Māori and Pasifika students. Summaries of these correlations are presented in Table 8 and Table 9.

Table 8: Summary of Correlations (r) for Literacy Leader Dimensions and Student Achievement Scores (2009)

	Average Gain	Year 9			Year 10		
		Term 1	Term 4	Gain	Term 1	Term 4	Gain
Breadth	-0.19	-0.05	-0.26	-0.21	-0.18	-0.17	-0.02
Inquiry	0.04	-0.03	-0.02	0.00	-0.39	-0.29	0.02
Coherence	-0.07	0.04	-0.10	-0.12	-0.12	-0.13	-0.03
Leadership	-0.11	0.01	-0.10	-0.10	-0.08	-0.12	-0.05
Content	-0.29	0.22	-0.15	-0.28	0.13	-0.03	-0.13
Total Average	-0.19	0.05	-0.20	-0.22	-0.30	-0.32	-0.08

Table 9: Summary of Correlations (r) for Literacy Leader Dimensions and Student Achievement Scores for Māori and Pasifika Students (2009)

	Year 9			Year 10		
	Term 1	Term 4	Gain	Term 1	Term 4	Gain
Breadth	0.06	-0.08	-0.11	-0.30	-0.20	-0.06
Inquiry	0.00	-0.01	-0.01	-0.35	-0.51*	-0.48*
Coherence	-0.02	-0.30	-0.23	-0.08	-0.02	0.04
Leadership	0.08	-0.07	-0.12	0.15	0.05	-0.05
Content	0.29	-0.13	-0.32	0.22	0.14	0.04
Total Average	**0.13**	**-0.22**	**-0.28**	**-0.08**	**-0.21**	**-0.25**

* $p < .05$.

The intercorrelations between dimensions (Table 10) show relative independence (none being statistically significant), meaning that schools were not consistently high (or low) on each dimension and there was substantial variation across these dimensions.

Table 10: Summary of Intercorrelations for Dimensions (2009)

	Breadth	Inquiry	Coherence	Leadership	Content	Total Average
Breadth	-	0.13	-0.03	-0.06	0.35	0.31
Inquiry	0.13	-	-0.10	0.10	-0.11	0.47
Coherence	-0.03	-0.10	-	-0.22	-0.02	0.17
Leadership	-0.06	0.10	-0.22	-	0.27	0.73
Content	0.35	-0.11	-0.02	0.27	-	0.50
Total Average	**0.31**	**0.47**	**0.17**	**0.73**	**0.50**	**-**

Because of this general variability and inconsistency across dimensions, and also because of the questionable reliability of the e-asTTle data, we explored the possibility that schools that were relatively high on all dimension had higher gains or levels than schools that were relatively low across all dimensions. A median split was conducted by ranking the schools based on their mean score across all dimensions. The 13 schools with the highest dimension scores were classified as 'high', while the others were classified as 'low'. This analysis also did not reveal any systematic relationships (Table 11–Table 12).

Table 11: Summary of T Tests between Schools that had Low and High Total (Average) Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	N	*M*	*SD*	*N*	*M*	*SD*			
Average Gain	11	81.82	44.03	13	80.55	34.62	0.08	22	0.94
Year 9									
Term 1	11	1494.08	13.72	12	1498.41	34.77	-0.40	14.59	0.70
Term 4	11	1573.62	44.83	12	1569.19	37.97	0.26	21	0.80
Gain	11	79.53	50.67	12	70.78	35.08	0.49	21	0.63
Year 10									
Term 1	9	1506.86	24.11	12	1501.48	39.15	0.36	19	0.72
Term 4	9	1597.87	29.70	12	1601.88	49.12	-0.22	19	0.83
Gain	9	91.01	29.38	12	100.40	48.24	-0.52	19	0.61

Table 12: Summary of T Tests between Schools that had Low and High Total (Average) Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	N	*M*	*SD*	*N*	*M*	*SD*			
Year 9									
Term 1	11	1489.80	11.94	12	1499.72	37.95	-0.86	13.33	0.40
Term 4	11	1568.92	40.21	12	1570.71	22.28	-0.13	21	0.90
Gain	11	79.12	45.56	12	70.99	31.68	0.50	21	0.62
Year 10									
Term 1	9	1501.19	29.98	11	1510.55	37.07	-0.61	18	0.55
Term 4	9	1592.91	40.10	11	1609.48	78.16	-0.58	18	0.57
Gain	9	91.72	33.90	11	98.93	51.01	-0.36	18	0.72

The analysis, however, of Focus Class organisation in 2009 did yield systematic relationships. Schools were defined as having a Class Focus if they indicated in the Literacy Leader questionnaire that they selected Core teachers of a particular class to be Focus Group teachers. The summary data are shown in Table 13. The patterns of significant differences between Class Focus and Other Focus suggest that those with a class focus generally had higher student achievement means than classes with Other Focus.

Table 13: Achievement of Class and Other Focus Schools

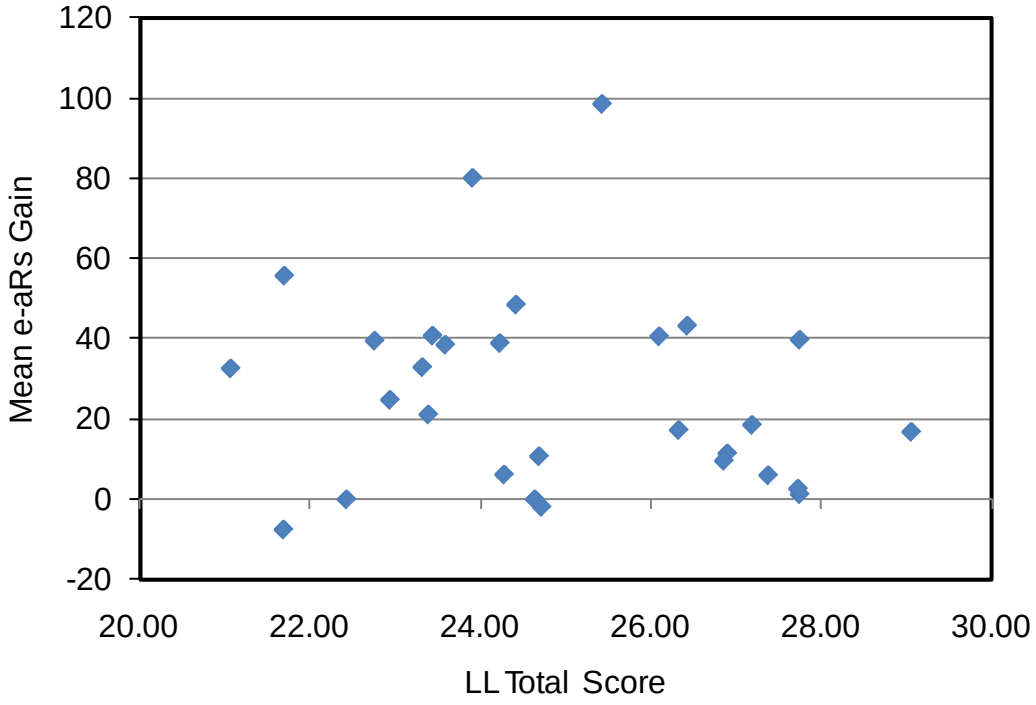
		Class Focus			Other Focus						
		N	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	***d***
All students											
Time 1	Year 9	10	1509.38	18.80	13	1486.31	27.54	-2.27	21	0.03	-0.98
	Year 10	10	1516.88	37.49	11	1491.88	23.95	-1.84	19	0.08	-0.79
Time 2	Year 9	10	1583.54	44.61	13	1561.89	35.94	-1.29	21	0.21	-0.53
	Year 10	10	1626.53	28.69	11	1576.20	36.06	-3.51	19	<.01	-1.54
Gain	Year 9	10	74.16	51.70	13	75.59	36.04	0.08	21	0.94	0.03
	Year 10	10	109.65	43.31	11	84.32	35.64	-1.47	19	0.16	-0.64
Māori and Pasifika students											
Time 1	Year 9	10	1505.07	27.05	13	1487.20	28.05	-1.54	21	0.14	-0.65
	Year 10	9	1528.28	29.00	11	1488.39	26.00	-3.24	18	<.01	-1.45
Time 2	Year 9	10	1577.11	31.11	13	1564.26	31.63	-0.97	21	0.34	-0.41
	Year 10	9	1643.11	66.53	11	1568.40	35.03	-3.23	18	<.01	-1.41
Gain	Year 9	10	72.04	38.68	13	77.06	39.33	0.31	21	0.76	0.13
	Year 10	9	114.83	48.14	11	80.02	33.06	-1.91	18	0.07	-0.84

3.2.4 Question 2: Relationship between Implementation and Achievement (2010)

A total score was calculated for all schools across the nine themes. Two schools were not included as they were missing the mean score for the theme PLCs Department.

A preliminary visual inspection of the relationship between e-aRs gains and median levels for Year 9 students in 2010 showed no systematic relationship. Figure 6 below presents the relationship between mean e-aRs gain and LL total implementation score for each school, which shows little evidence of a systematic relationship.

Figure 6: Total LL score plotted against school's mean e-aRs gain for Year 9, 2010



More detailed analyses were then conducted. Correlations were conducted between school means and questionnaire dimensions, including an overall mean across all dimensions (similar to the total across all dimensions but on the same scale as the dimension means). The school means covered several sources: means at Terms 1 and 4 and gains from Term 1 to 4, 2010. These were broken down by year level as scores are not comparable between Year 9 and Year 10. These were calculated for all students and for Māori and Pasifika students combined. This created a total of ten questionnaire dimensions (including the mean), and twelve e-asTTle means.

No significant correlations were found between questionnaire dimensions and e-aRs means (Table 14).

Table 14: Correlations between Literacy Leader Questionnaire (2010) Dimensions and Student Achievement (e-aRs)

		All Students						Māori and Pasifika Students					
		Term 1, 2010		Term 4, 2010		Gains Term 1–4		Term 1, 2010		Term 4, 2010		Gains Term 1–4	
Dimension		**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**
Facilitator School Support Services	*r*	-0.41	-0.37	-0.32	-0.32	0.26	0.06	-0.43	-0.34	-0.29	-0.29	0.13	0.11
	p	0.04	0.06	0.11	0.11	0.21	0.77	0.03	0.09	0.15	0.14	0.55	0.59
	n	26	26	26	27	25	26	26	26	26	27	25	26
Leadership	*r*	0.18	0.17	0.08	0.17	0.04	0.11	0.18	0.15	0.08	0.26	-0.10	0.10
	p	0.38	0.42	0.70	0.40	0.86	0.58	0.38	0.47	0.68	0.18	0.64	0.62
	n	26	26	26	27	25	26	26	26	26	27	25	26
PLC Focus Group	*r*	-0.03	0.02	0.06	-0.01	-0.01	-0.29	-0.22	-0.03	-0.11	0.16	-0.03	-0.21
	p	0.90	0.92	0.79	0.97	0.96	0.16	0.29	0.89	0.59	0.43	0.89	0.30
	n	26	26	26	27	25	26	26	26	26	27	25	26
PLCs Whole Staff	*r*	-0.19	-0.45	-0.56	-0.51	-0.30	0.07	-0.09	-0.37	-0.52	-0.47	-0.32	0.11
	p	0.35	0.02	0.00	0.01	0.15	0.75	0.67	0.06	0.01	0.01	0.12	0.58
	n	26	26	26	27	25	26	26	26	26	27	25	26
PLCs Department	*r*	0.29	0.32	0.11	0.15	-0.30	-0.16	0.17	0.37	-0.11	0.33	-0.40	-0.15
	p	0.16	0.13	0.60	0.48	0.17	0.44	0.44	0.08	0.63	0.10	0.06	0.50
	n	24	24	24	25	23	24	24	24	24	25	23	24
Inquiry in Teacher	*r*	-0.17	0.15	-0.11	0.10	0.18	-0.12	-0.15	-0.03	0.07	0.05	0.19	-0.02
	p	0.41	0.46	0.61	0.64	0.38	0.57	0.48	0.90	0.73	0.79	0.37	0.91
	n	26	26	26	27	25	26	26	26	26	27	25	26
Inquiry in Student	*r*	0.12	0.09	-0.01	0.20	-0.22	-0.07	0.04	-0.03	-0.05	0.14	-0.09	0.02
	p	0.56	0.68	0.95	0.31	0.29	0.75	0.84	0.89	0.82	0.50	0.68	0.92
	n	26	26	26	27	25	26	26	26	26	27	25	26
Māori and Pasifika Student Focus	*r*	-0.02	0.10	0.09	0.13	-0.09	-0.20	-0.08	-0.12	0.22	-0.05	0.16	-0.09
	p	0.93	0.64	0.68	0.53	0.68	0.33	0.70	0.57	0.29	0.80	0.44	0.66
	n	26	26	26	27	25	26	26	26	26	27	25	26
Intensity	*r*	-0.05	0.08	-0.12	0.06	0.05	-0.01	-0.07	-0.02	-0.04	0.13	-0.03	0.12
	p	0.81	0.69	0.56	0.78	0.83	0.97	0.75	0.92	0.87	0.52	0.91	0.58

		All Students						Māori and Pasifika Students					
		Term 1, 2010		Term 4, 2010		Gains Term 1–4		Term 1, 2010		Term 4, 2010		Gains Term 1–4	
Dimension		**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**	**Year 9**	**Year 10**
	n	26	26	26	27	25	26	26	26	26	27	25	26
Total Average	*r*	0.05	0.05	-0.10	-0.06	-0.25	-0.25	-0.09	0.04	-0.26	0.07	-0.31	-0.22
	p	0.81	0.82	0.64	0.78	0.25	0.23	0.68	0.86	0.22	0.72	0.15	0.31
	n	24	24	24	25	23	24	24	24	24	25	23	24

In 2010 a more systematic analysis of the relationship between Focus Class organisation and achievement was conducted. These are detailed in Appendix I.

Independent samples *t* tests were conducted to compare Focus Class and non-Focus Class students specifically for the Māori and Pasifika students' gains from Term 1 to Term 4 (Table 15). Māori students from Focus Classes significantly outperformed their peers from the non-Focus Classes. However, the same was not found with the Pasifika students. Overall, students from Focus Classes, including NZ European and other ethnicities, made significantly greater gains than students from non-Focus Classes.

Table 15: Independent Samples T Test Comparisons in 2010 Achievement Gain between Focus Class and Non-Focus Class for Māori and Pasifika Students by Year Level

	Focus Class			Non-Focus Class			*t*	*df*	*p*	*d*
	N	***M***	***SD***	***N***	***M***	***SD***				
Māori										
Year 9	357	31.31	53.46	650	20.13	51.75	3.24	1005	<.01	0.21
Year 10	243	28.01	50.74	681	7.88	55.28	4.98	922	<.001	0.37
Pasifika										
Year 9	161	26.29	49.98	588	24.14	47.71	0.50	747	0.62	0.05
Year 10	136	18.52	44.66	635	13.56	51.18	1.05	769	0.30	0.10
All Students										
Year 9	1204	27.82	53.48	3498	21.40	48.67	3.67	1933	<.001	0.13
Year 10	855	15.94	48.49	3637	4.76	49.41	5.98	4490	<.001	0.23

Though these differences were statistically significant, they were not educationally significant according to the e-asTTle website (i.e., less than 22 e-aRs). The mean difference between Focus and non-Focus classes for Year 10 Māori students was close to being educationally significant (M_{diff} = 20.14, *SE* = 3.88). This was also reflected in the effect sizes, where the effect size for Year 10 Māori students was 0.37.

Table 16 summarises the results of comparing Focus Class and non-Focus Class students in Term 4 2010. For both Māori and Pasifika students, there were no significant differences between Focus and non-Focus Classes in overall scores at the end of the year. However, Māori and Pasifika students in Focus Classes began at lower levels (see Appendix I for further detail), which suggests that Focus Classes may have been selected as those with underachieving Māori and Pasifika students. The greater gains of these students (Table 15) shows that these students effectively 'caught up' with the students in non-Focus Classes by Term 4, 2010.

Table 16: Independent Samples T Test Comparisons in Term 4 2010 Achievement Score between Focus Class and Non-Focus Class for Māori and Pasifika Students by Year Level

	Focus Class			Non-Focus Class			*t*	*df*	*p*	*d*
	N	***M***	***SD***	***N***	***M***	***SD***				
Māori										
Year 9	464	1472	82.37	963	1478	81.02	-1.15	1425	0.25	-0.07
Year 10	324	1500	77.52	1037	1504	77.17	-0.75	1359	0.45	-0.05
Pasifika										
Year 9	223	1456	77.30	675	1461	78.61	-0.77	896	0.44	-0.06
Year 10	194	1484	86.05	769	1481	79.46	0.51	961	0.61	0.04
All Students										
Year 9	1478	1493	85.52	4291	1503	85.21	-3.85	5767	<.001	-0.12
Year 10	1071	1517	80.30	4783	1527	81.34	-3.58	5852	<.011	-0.12

4. Implications

We have determined the following implications from the research into SLP implementation, using existing research literature where appropriate.

1. The trends across 2009 and 2010 suggest that SLP was implemented in part with increasing fidelity towards what we describe as an Optimal Model. The level of Inquiry increased, the perceived focus on underachievement and Māori and Pasifika students increased and the use of Focus Class structure increased. However, some areas remained at 2009 levels, specifically the Intensity of implementation (eg, number of whole-staff sessions) and the Coherence (eg, degree of integration with other programmes including implementation of the New Zealand Curriculum in the school). These limits appear to be related to constraints identified at the school level, especially the need to ensure through training, school organisation and funding levels that an appropriately recognised and resourced position is established as the leader of inquiry and professional development within the school, with status and time to implement the role. A limited estimate of the full costs (Ministry, School, National Coordination and Research) per school per year suggests approximately $50-60,000 per school. This may not provide enough funding to enable effective levels of leadership in a 'ripple' process within the school involving teacher release and whole-staff and departmental meetings, where systematic professional learning communities are established and maintained. Schools reported less focus on SLP than other, apparently higher funded, programmes at a school level. Currently, no research evidence exists in New Zealand that provides cost-benefit comparisons between interventions. Some very successful school change programmes report one or more full time staff placed in, or released in, a school to implement change at a school level (McNaughton, 2011).

2. A major finding is that a Focus Class organisation, where the inquiry and intervention focused on a common class of students, is strongly indicated in implementation models in secondary schools. To our knowledge, no other study of an intervention has systematically tested through comparisons, the effects on student achievement of Focus Class versus non Focus Class within the same intervention. Other projects have adopted forms of this organisation, including Te Kotahitanga and projects by Starpath. In these successful interventions, the Focus Class organisation is one component in a combination of components. We were able to check the specific significance of this component within the overall SLP intervention (which was also multicomponential). The evidence supports making this an evidence-based design feature. However, there are caveats. The evidence from SLP, as noted above, also suggests that without sufficient resourcing including a dedicated role within a school, the wider effects on staff and programme coherence may be threatened. We do not know from this research the level of resourcing needed, but there is an urgent need for detailed cost-benefit analyses and parametric analyses.

3. No other dimensions of the Optimal Model appear to be related to student outcomes. There are several possible reasons for this nil finding. The implication is that more research is needed on how these features of an Optimal Model impact at the level of school and classroom implementation on teaching and learning, with specific attention to parametric analyses (eg, how 'much' of these dimensions is needed to achieve what effects?) as well as qualitative analyses (eg, what are the qualities of effective data discussions focused on the literacy needs that make a difference to the underachievement of Māori and Pasifika students?). Ongoing research suggests that effective data discussions need to be very specific and, to be effective, draw on extensive pedagogical content knowledge (Lai, Timperley, & McNaughton, 2010).

4. Going further beyond the evidence from this SLP research, there are suggestions that a model other than the cascading implementation model might be needed. A new model would focus the functions of inquiry and

implementation more directly within the role and function of the leader of inquiry and professional development in the school. In this model, a research and development team would provide direct professional development support and research and evaluation support to build the expertise for that leader to design and lead the systematic inquiry into students' needs and the fine-tuning of instruction across content areas. The role would need extensive graduate level training and would need to be a specifically designated and funded position rather than an 'add on' or modification of an existing project such as a HOD. Rather than a cascading model, a research and development partnership model may be more powerful (McNaughton, 2011). This would involve an overlap involving professional learning communities with the Lead Teacher at the union (the common intersection).

5. Analysis of the effects of the implementation on student achievement will be completed through the National Coordination reporting process. The data from 2011 will be crucial for this because these achievement data will provide the first full data set of longitudinal changes in literacy across two years (for the Cohort 2 schools). Analyses will not be restricted to Years 9 and 10. The National Coordination Team is also analysing trends in pass rates at NCEA levels (in terms of national certification in levels 1, 2, 3 and University Entrance). This is an appropriate requirement from the SLP design. A very significant research and policy question remains: Is the focus on underachievement in Years 9 and 10 necessary and/or sufficient to impact markedly on measures of engaging in the New Zealand Curriculum and, notably, nationally expected levels of success at University Entrance for Māori and Pasifika? If the answer to that question is largely negative, then new implementations of professional development for secondary literacy may need to shift their focus. The concern here is that impacting reading and writing at Years 9 and 10 may not be sufficient to enable higher pass rates consistent with *Ka Hikitia* targets and the expectations of the *Pasifika Education Plan*.

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Appendix A: Summary of National Wānanga and National Meetings with School Support Service Literacy Facilitators

Table 17: Summary of National Wānanga

Date	Duration	Participants	Overview of content
December 2008	1 day	Cohort 1 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Overview of SLP project design and aims Key principles of effective adolescent literacy instruction Roles and responsibilities Attributes of effective professional development design
February 2009	2 days	Cohort 1 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Deeping understanding of project aims and design Guidelines of Effective Adolescent Literacy Instruction (GEALI) Establishing effective professional learning communities Learning conversations e-asTTle Conducting inquiry
December 2009	1 day	Cohort 2 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Overview of SLP project design and aims Key principles of effective adolescent literacy instruction Roles and responsibilities Attributes of effective professional development design
February 2010	2 days	Cohort 2 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Maintaining momentum GEALI Research feedback Culturally responsive pedagogy with Māori and Pasifika focus Focus group design
February 2010	2 days	Cohort 1 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Research feedback Culturally responsive pedagogy with Māori and Pasifika focus Focus group design GEALI Writing
February 2011	2 days	Cohort 2 Literacy Leaders & Principals/SMT SSS Literacy Facilitators	Research feedback Culturally responsive pedagogy with Māori and Pasifika focus Focus group design GEALI Inquiry

Table 18: Summary of National Meetings with School Support Service Literacy Facilitators

Date	Duration	Participants	Overview of content
December 2008	1 day	Literacy Facilitators and Regional Facilitators	Preparation for Cohort One introductory wānanga
February 2009	1 day	Literacy Facilitators and Regional Facilitators	Clarifying roles and responsibilities Introduction to GEALI and inquiry
March 2009	1 day	Literacy Facilitators and Regional Facilitators	e-asTTle Data analysis
May 2009	2 days	Literacy Facilitators and Regional Facilitators	e-asTTle Māori achievement GEALI
August 2009	1 day	Regional Facilitators	Reflection on initial progress reports School selection Literacy leader attributes
October 2009	1 day	Regional Facilitators	Focus group composition
November 2009	1 day	Literacy Facilitators and Regional Facilitators	Teacher judgements Planning for Cohort 2 initial wānanga
February 2010	2 days	Literacy Facilitators and Regional Facilitators	e-asTTle Feedback about 2009 data and research findings SSS reporting Wānanga planning
April 2010	2 days	Literacy Facilitators and Regional Facilitators	Māori and Pasifika student focus Leadership GEALI especially writing
June 2010	1 day	Regional Facilitators	Research updates Sustainability
October 2010	1 day	Regional Facilitators	Inquiry into SLP and professional development
December 2010	2 days	Literacy Facilitators	Planning and resource development for Literacy 9-13 variation
February 2011	3 days	New Literacy Facilitators	Induction for new facilitators Inquiry and professional development, particularly in response to 2010 research and analysis

Appendix B: Key Common Tools for SLP

The Secondary Literacy Project is framed on principles of evidence-based inquiry and knowledge building. A set of resources, some already designed by MoE, and some purpose built by the National Coordination Team were used for the project. These were designed to support this iterative process of inquiry and knowledge building.

Overarching Project Tools

Key Common Tools for SLP

The Literacy Learning Progressions (LLP, Ministry of Education, 2010) articulate the kinds of literacy skills, knowledge, and achievement students need by the end of Year 10 as determined by the curriculum need. This is an ambitious and aspirational vision. The National Coordination Team sees this as ambitious and aspirational because a great many Year 10 students have not achieved these levels yet. E-asTTle Reading was used by all project schools as *one* tool to support inquiry into students' literacy learning as framed by *LLP*.

e-asTTle (http://e-asttle.tki.org.nz/)
SLP schools were required to assess all Year 9 and 10 students using e-asTTle at the beginning and end of each year. Schools were required to follow the conditions of testing (such as test composition, curriculum functions, deadlines) as advised by the National Coordination team. They were also required to provide additional information as requested.

The Guidelines for Effective Adolescent Literacy Instruction (Wilson, 2009) articulate an ambitious research-informed vision for effective subject-area literacy teaching in secondary schools. It is clearly not expected that all teachers will achieve this level of expertise in all dimensions in a short time – it requires deep learning over an extended period of time.

Maintaining Momentum (Wilson & Lai, 2009) articulates a research-informed vision for effective secondary school organisation and leadership.

SLP Progress Reports form part of SSS reporting requirements and therefore had an important compliance function. In addition, they informed the National Coordination Team's inquiry about professional learning needs at each level of the project.

Curriculum and Practice Tools

Mining the Data

This is a tool designed to support teachers' interpretation and analysis of student achievement. While it is framed around e-asTTle, an important principle that underpins this tool is the need for teachers to make instructional decisions on multiple sources of data. This tool was not mandated, but it was expected that LFs and LLs employed an approach consistent with that of the tool. For example, 'Mining the Data' exemplified the importance of identifying specific 'catalytic' aspects of student literacy using multiple sources of information, and the value of triangulation, aggregation and disaggregation.

Application Information and Memoranda of Agreement

Information provided to schools at the time of their application/acceptance to SLP, and signed agreements between schools and their regional School Support Service clearly stated the expectations of each party. The MoE and National Coordination Team were to be advised as soon as possible if one party was failing to meet the obligations that they agreed to.

Appendix C: Literacy Leader Questionnaire Analysis in 2009

Descriptive

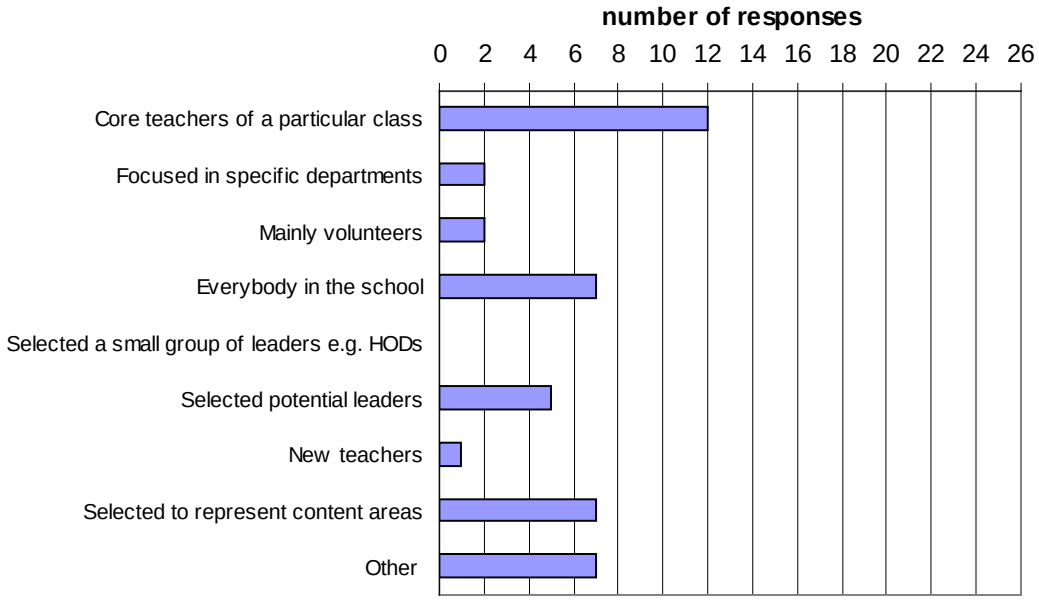
Demographics

Twenty-six Literacy Leaders (LLs) completed questionnaires. Sixteen of these had English as a main teaching subject, including those who taught another subject together with English (eg, drama). Of the remaining teachers there was much variety – no two teachers taught the same subject area.

In terms of LLs' other roles, ten were Head of Department, two were Assistant Principal or Deputy Principal, and the remaining were in a wide variety of roles.

Section 1

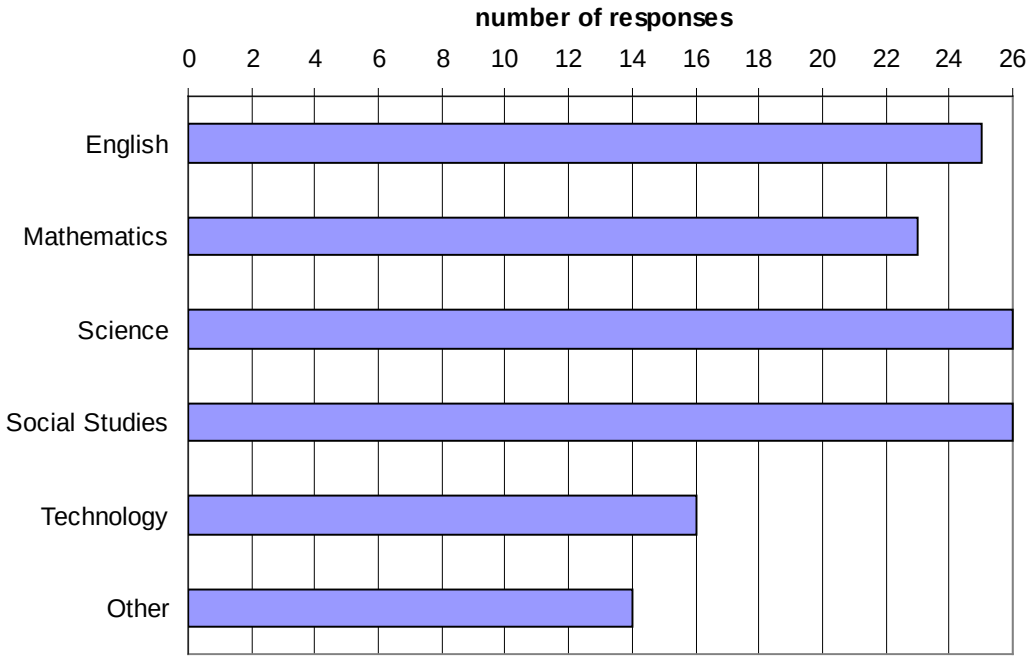
1.1: How have you selected Focus Group teachers at your school?



Focus Group teachers were most commonly selected for being core teachers of a particular class. 'Other' responses mainly focused on specific subject areas that the teachers were based in (eg, "Principal wanted someone from each department").

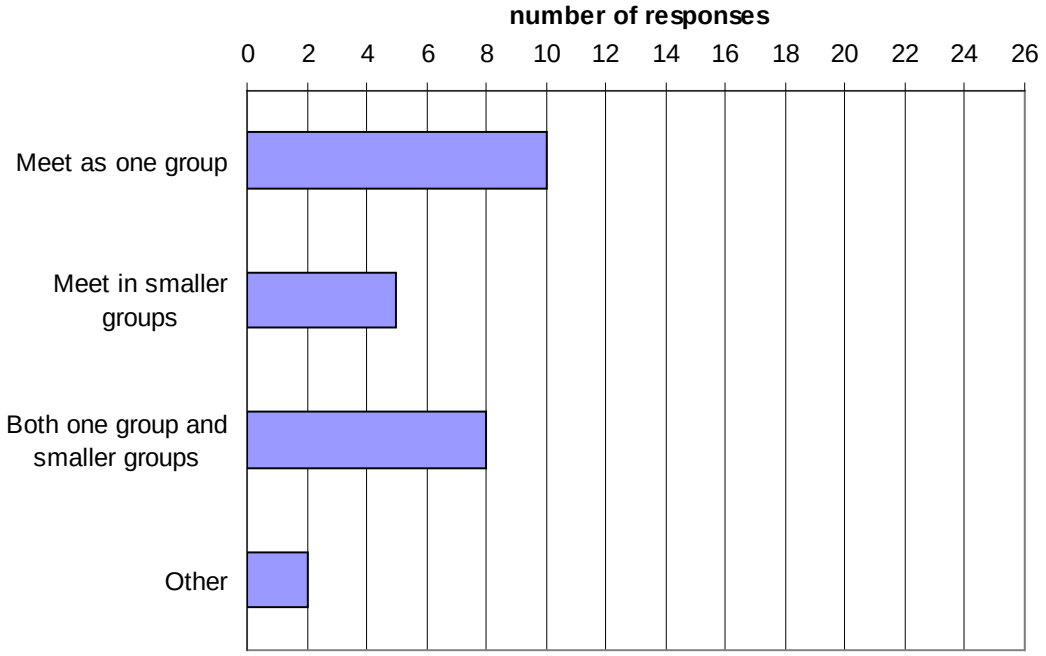
In general, most LLs focused on content areas when choosing Focus Group teachers (n = 14). Some chose theirs on a volunteer basis or chose every teacher in the school (n = 7). While a few selected based on both content areas and leadership (n = 4), only one chose Focus Group teachers based solely on leadership aspects.

1.2: Which content areas do Focus Group teachers teach?



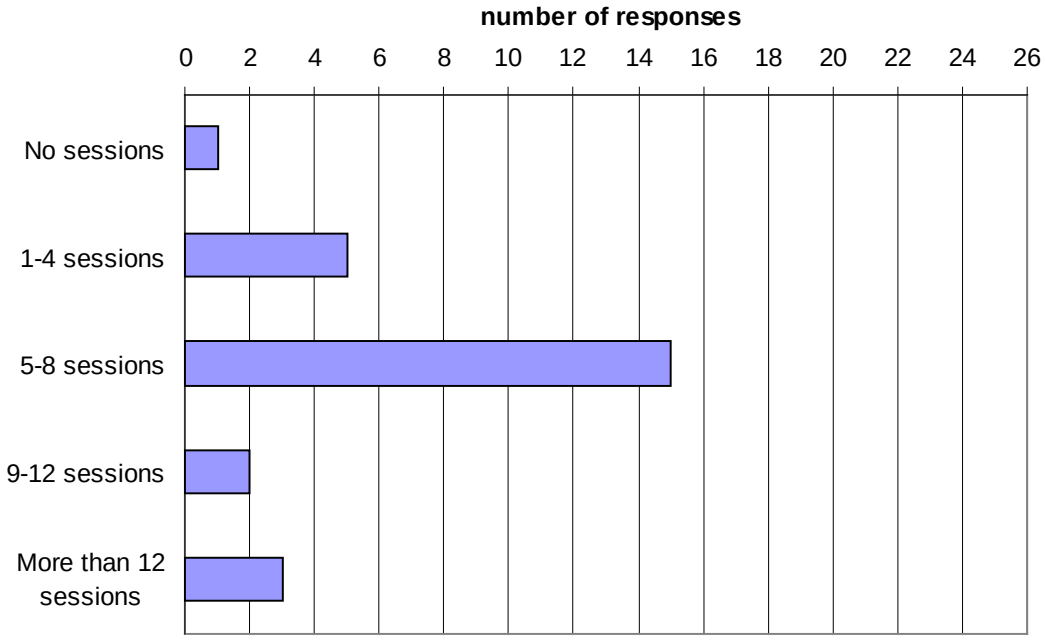
Most LLs stated that Focus Group teachers came from a wide variety of areas. All selected science and social studies and all but one selected English. 'Other' responses included a wide variety of areas, including art (*n* = 5), Te Reo Māori (*n* = 5), PE/health (*n* = 5), music (*n* = 4) and several other areas.

1.3: How do Focus Group teachers meet?



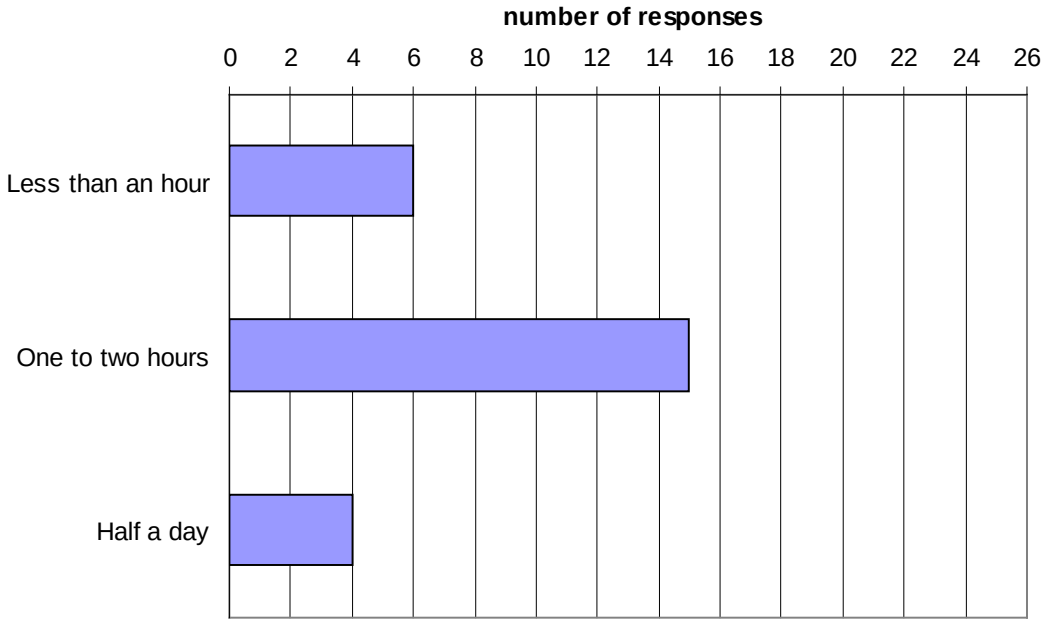
Mostly Focus Group teachers meet as one group, but in many schools they meet as a combination of small groups and one whole group depending on the context. Smaller groups usually consisted of 3–4 or 5–6 Focus Group teachers. 'Other' responses included whole-school meetings and one-to-one contact.

1.4: How often have you met each group of Focus Group teachers for Professional Development (PD) sessions in 2009?



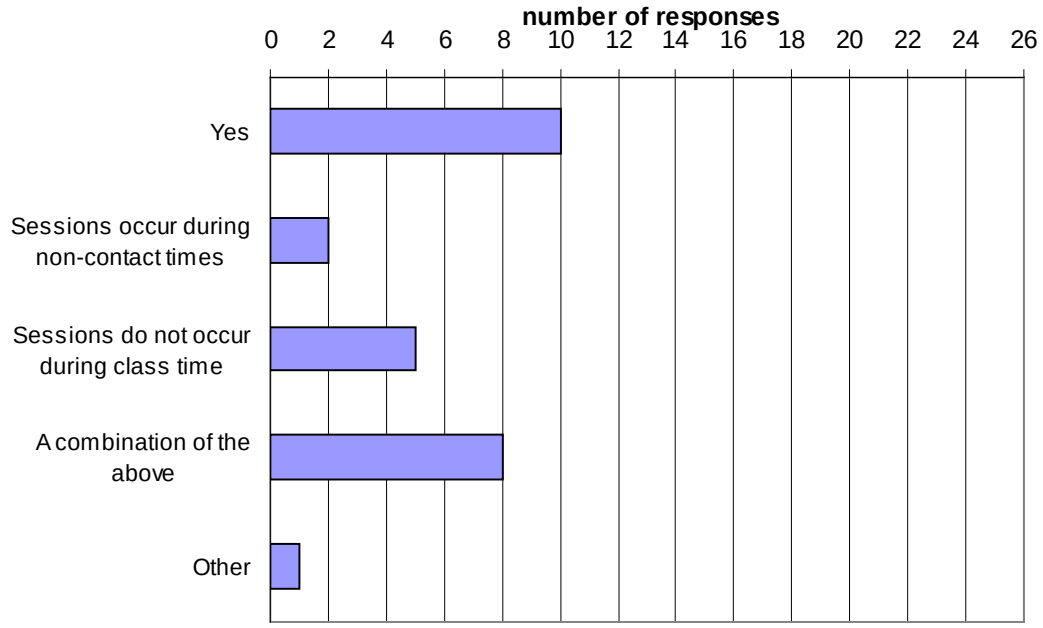
Most LLs have met each group of Focus Group teachers for PD sessions 5–8 times.

1.5: How long do sessions typically run for?



Sessions typically run for 1–2 hours for most LLs. Some LLs commented that their sessions take a variety of formats with some short sessions and some longer sessions.

1.6: Is cover usually provided to allow sessions/meetings in class time?

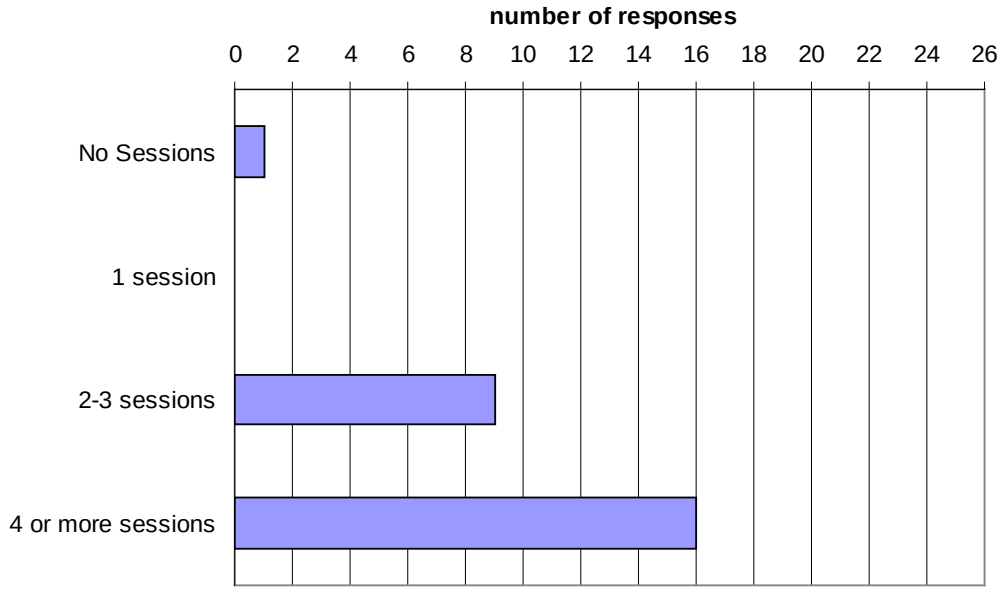


Mostly cover is provided, and many teachers also have a combination of cover provided and meetings outside teaching time.

1.7: When you have led sessions with Focus Group teachers, how many teachers are expected to attend, and on average how many do attend each session?

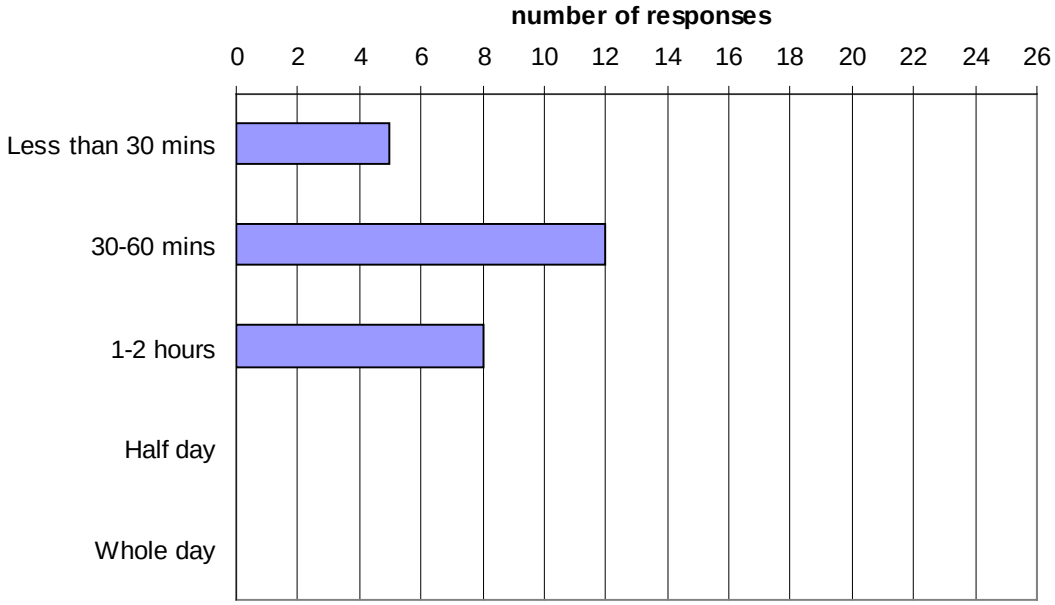
On average, 11 Focus Group teachers are expected to attend each meeting, with 17 of the 26 LLs stating that 12 or all are expected. Of these expected teachers, an average of 9 actually do attend each meeting.

1.8: How often have you held PD sessions with the whole staff in 2009?



All but one LL had held at least two PD sessions with the whole staff in 2009, with most holding four or more sessions.

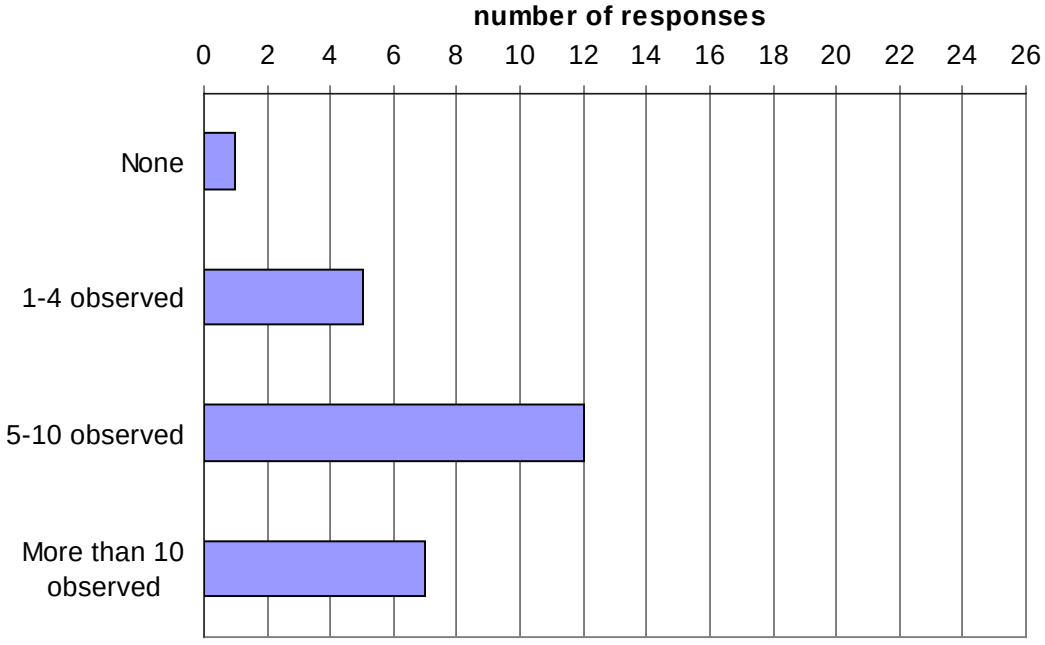
1.9: How long on average did each whole-staff session last?



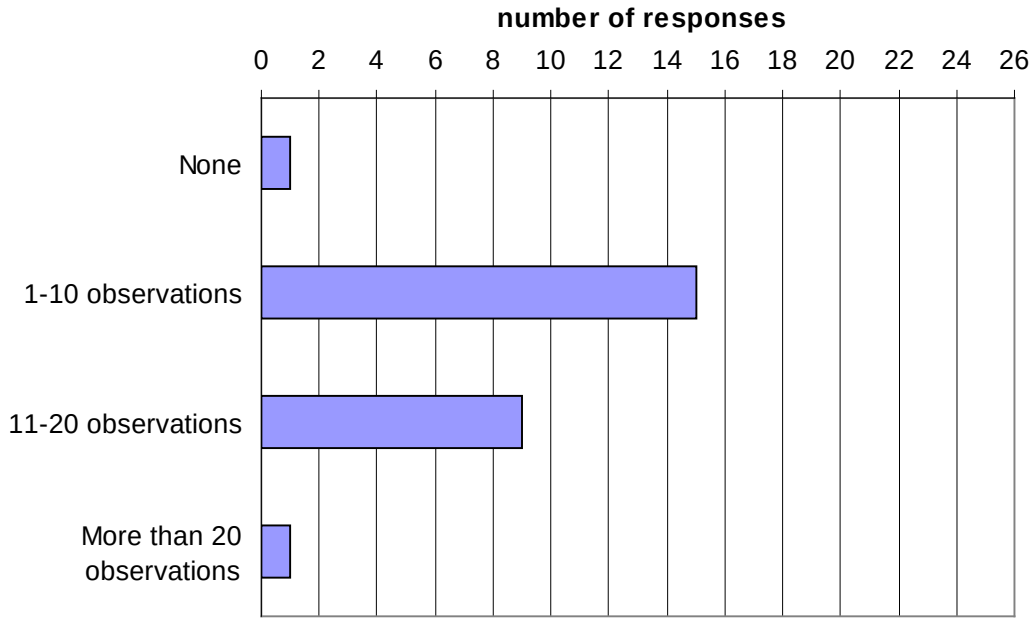
Most whole-staff sessions lasted 30–60 minutes, but there some variation. No LLs held whole-staff sessions across a half or whole day.

1.10–1.11: How many Focus Group teachers have you observed? And how many classroom observations in total would you have performed with Focus Group teachers?

Number of teachers observed:

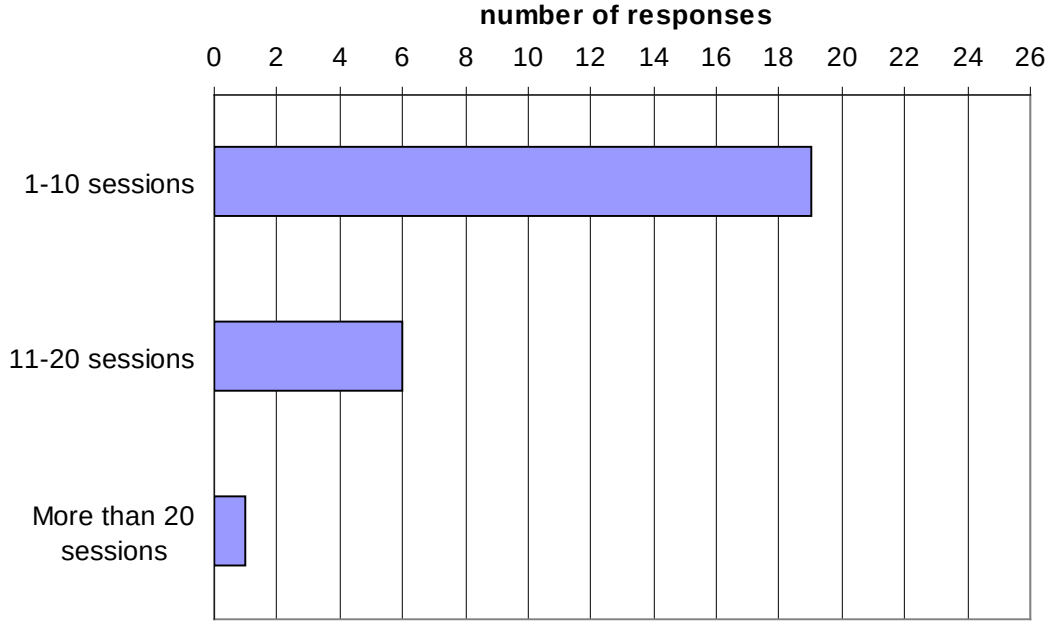


Number of observations in total:



LLs had observed an average of 7 teachers. This resulted in a total of 1–10 observations for most and 11–20 observations for many.

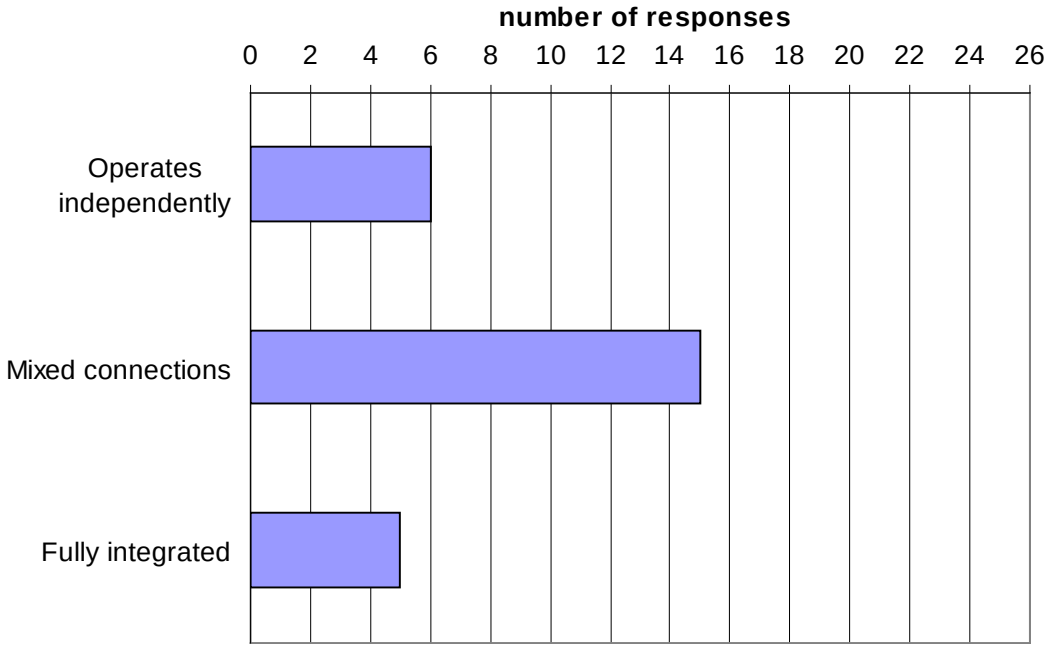
1.12: How many feedback/one-to-one discussion sessions in total have you had with Focus Group teachers?



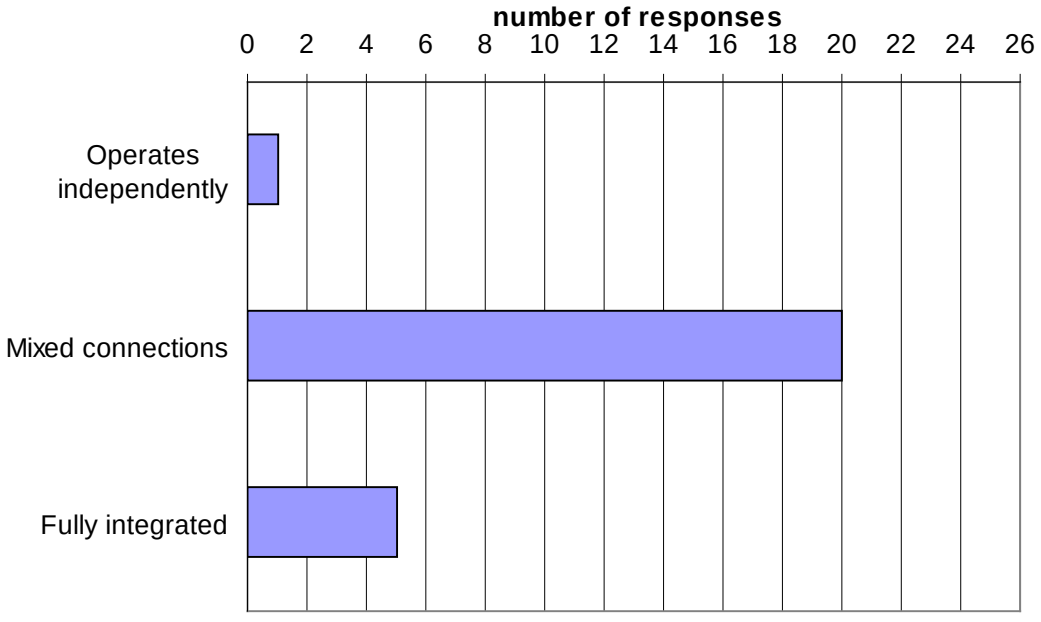
Most LLs have had 1–10 feedback or one-to-one discussion sessions with Focus Group teachers.

1.13–1.14: How well has the SLP programme fitted in with other interventions and professional learning in you school? And to what extent has the SLP programme been integrated into subject areas at Years 9 and 10 in your school?

How well SLP has fitted in with other interventions and professional learning:



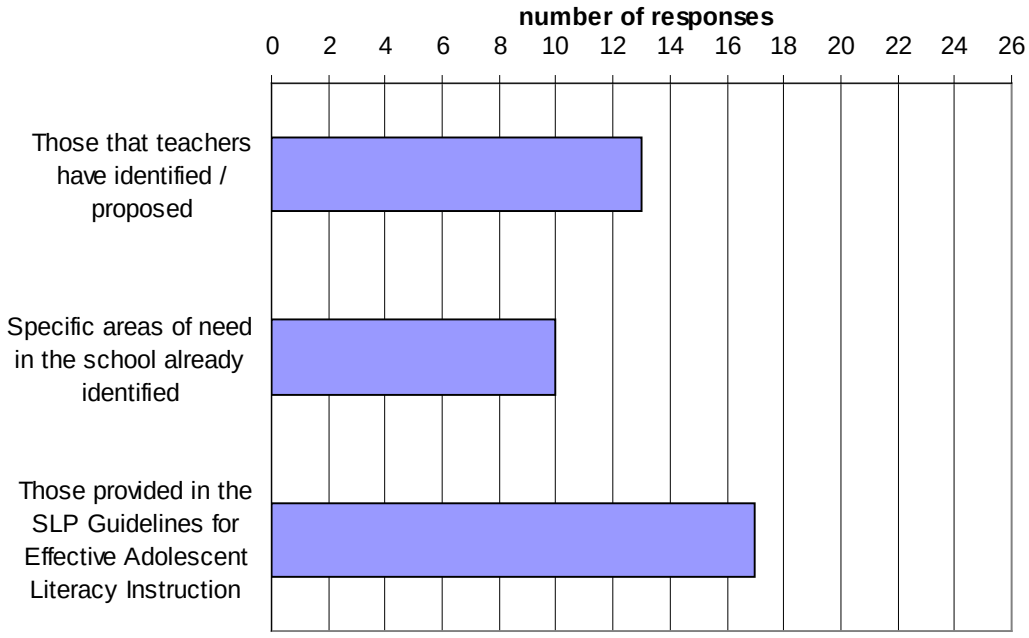
How SLP has been integrated into subject areas at Years 9 and 10:



In general, the SLP programme has had mixed connections with other interventions and professional learning. This is even more so in terms of integration with subject areas at Years 9 and 10.

Section 2

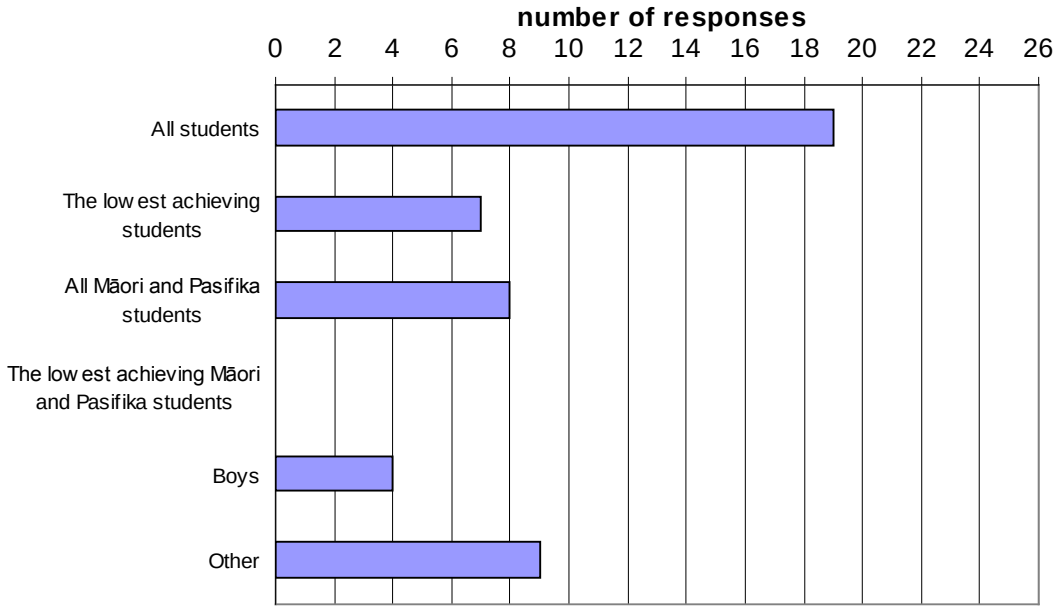
2.1–2.3: On what aspects have you focussed as LL? What were the specific areas of need and how were they identified?



Most LLs focused on aspects provided in the SLP guidelines. Eleven LLs selected more than one of these areas. Specific areas of need identified included those related to students' literacy development (including finding main ideas and vocabulary) and those relating to teachers' needs (including the use of achievement data in planning).

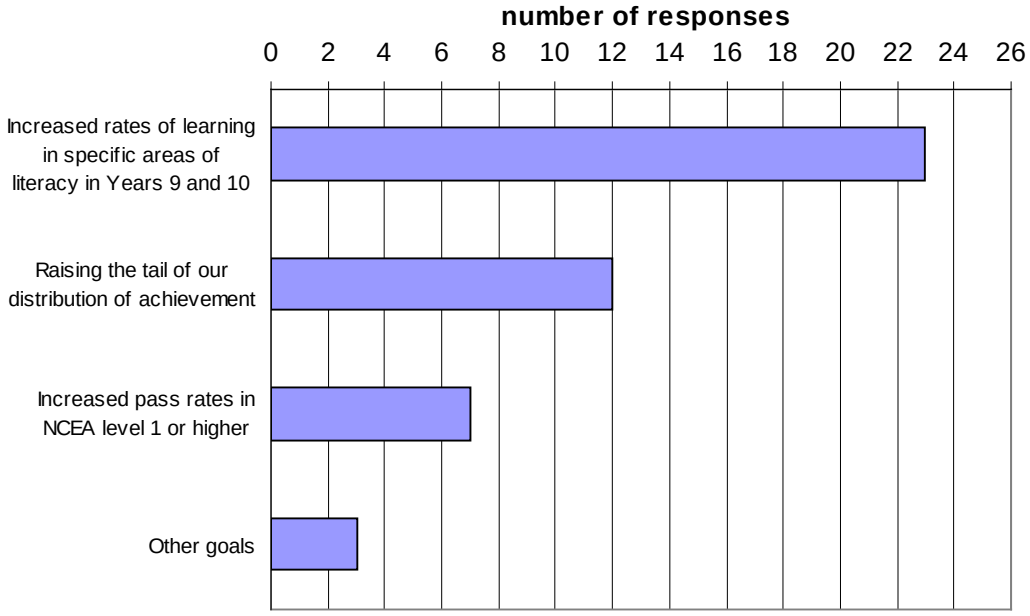
Of the 18 LLs who described the ways in which areas of need were identified, 13 referred to the analysis of achievement data (12 of which was asTTle). Other methods involved classroom observation, teacher reflection, self-assessment and surveys.

2.4–2.5: The students we have focussed on in our school have been...



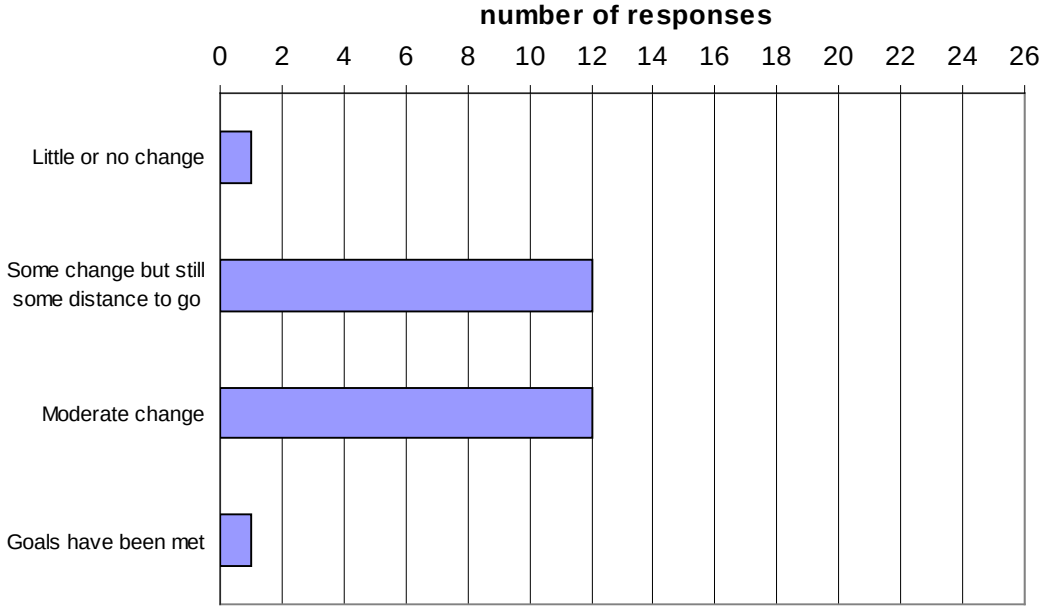
Most LLs selected 'all students' in terms of students that they focused on the most. While some chose the lowest achieving students and some chose Māori and Pasifika students, none chose the lowest achieving Māori and Pasifika students. Other responses included a focus on specific year levels (particularly Year 9 or 10) or specific classes.

2.6: The SLP goals for student achievement in our school have been...



Nearly all teachers (23 out of 26) named increased rates of learning in specific areas of literacy in Years 9 and 10 as one of the SLP goals for student achievement in their school.

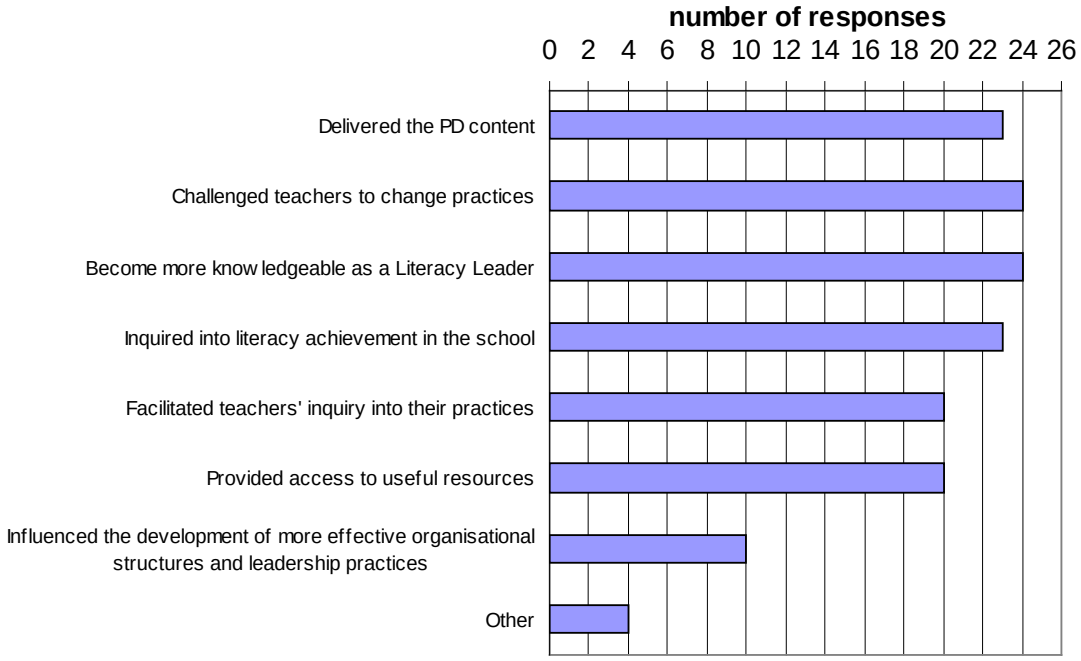
2.7: In relation to where you wanted to be at this point, please rank your progress toward meeting the goals described.



Only one LL selected that there had been little or no change, but only one selected that all had been met. The remaining LLs were split equally between feeling that there had been some change with some distance to go, and that there had been moderate change.

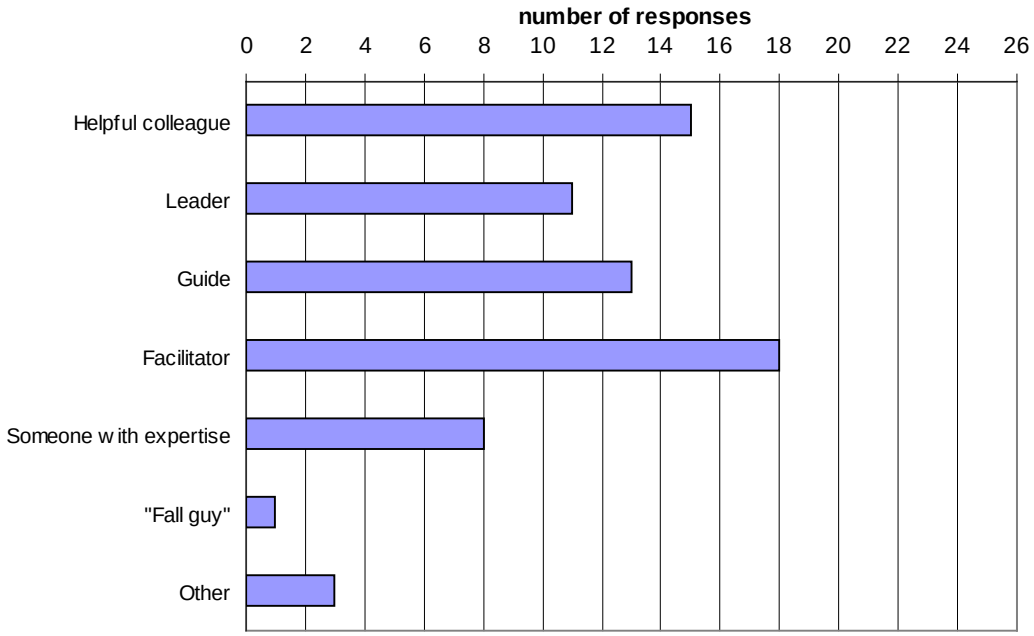
Section 3

3.1–3.2: In my role I have...



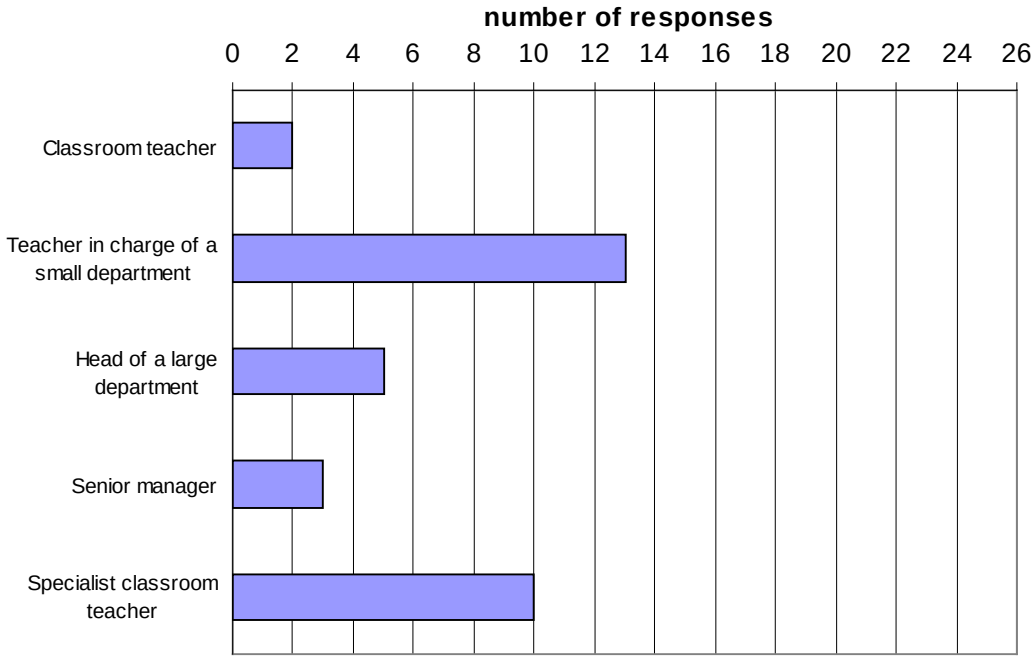
All LLs selected several features of their role, with the majority selecting between five and seven of the eight possible responses. This indicates that the role has many functions. Nearly all had challenged teachers to change practices, become more knowledgeable, delivered the PD content and inquired into literacy achievement. Most had also facilitated teachers' enquiry into their practices and provided access to resources. Fewer had influenced the development to more effective structures and practices.

3.3–3.4: What words would best describe how you see your role as LL?



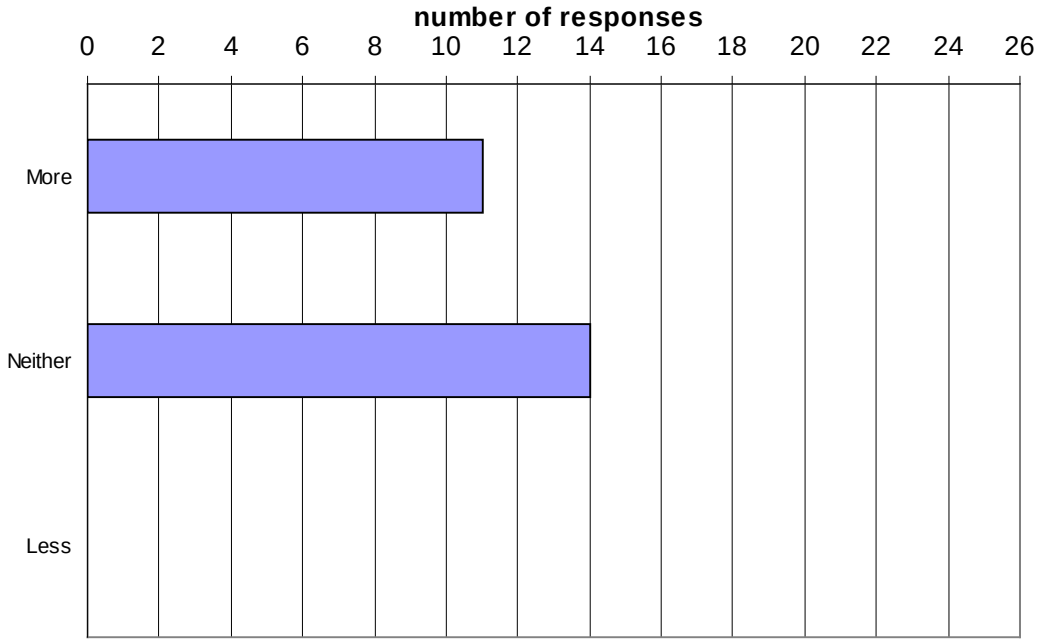
The majority of LLs selected several words to describe their role. Most described their role as being a facilitator, a helpful colleague and a guide. Other responses included that they too were a learner, and a critical friend.

3.5: Compared with other roles in your school, the LL part of your role carries as much status as:



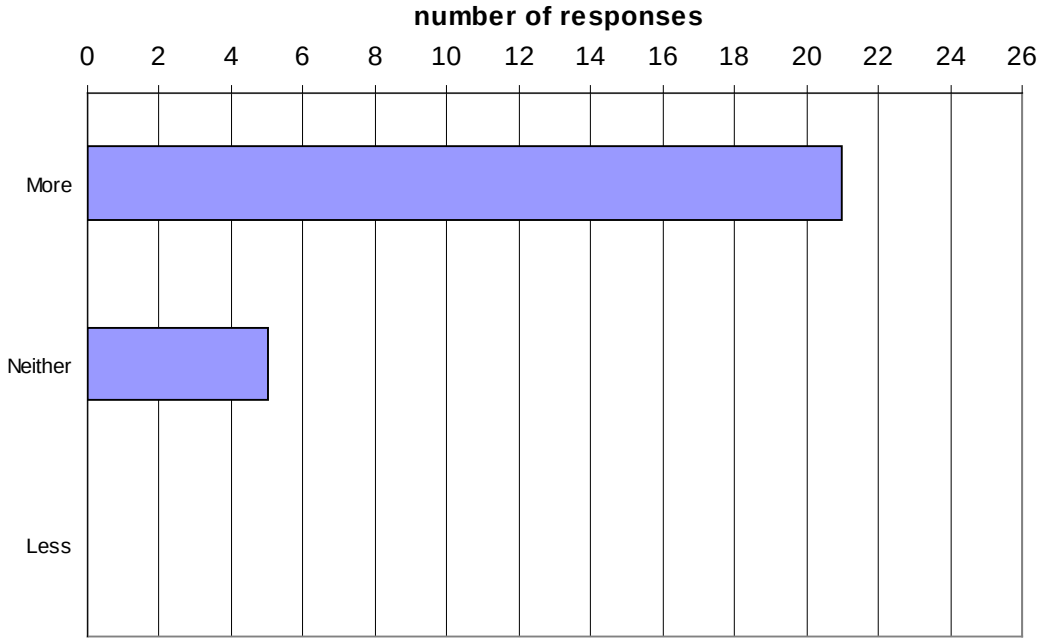
Half the LLs saw their role as carrying as much status as a teacher in charge of a small department. Note that some teachers provided more than one answer.

3.6: After nearly one year in the project, do you have more or less status in the school?



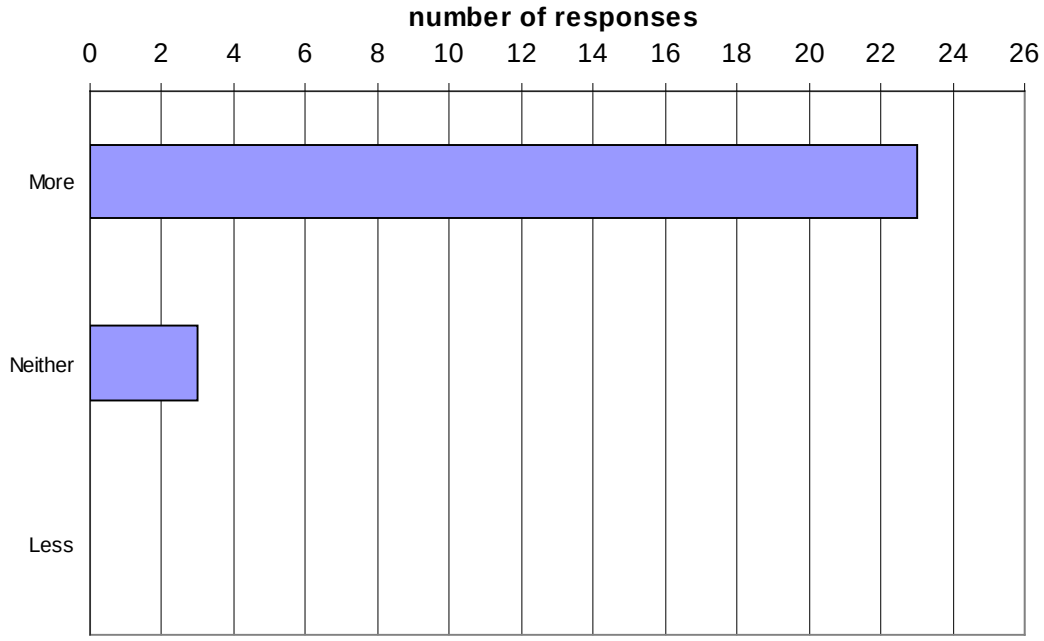
Across all three questions (3.6–3.8), not one LL responded that there was less status, commitment or potential. Slightly more LLs responded that they had neither more nor less status in the school.

3.7: After nearly one year in the project, are teachers overall more or less committed to literacy teaching?



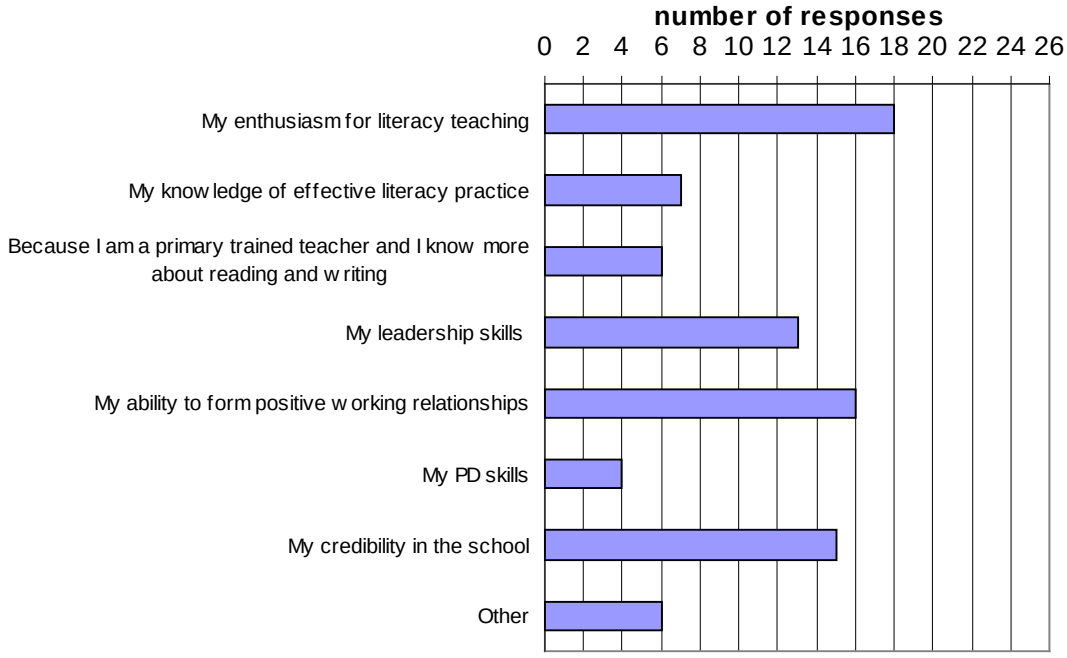
The majority of LLs claimed that teachers are more committed to literacy teaching after nearly one year in the project.

3.8: After nearly one year in the project, do you feel more or less optimistic about the potential of the project to improve student learning?



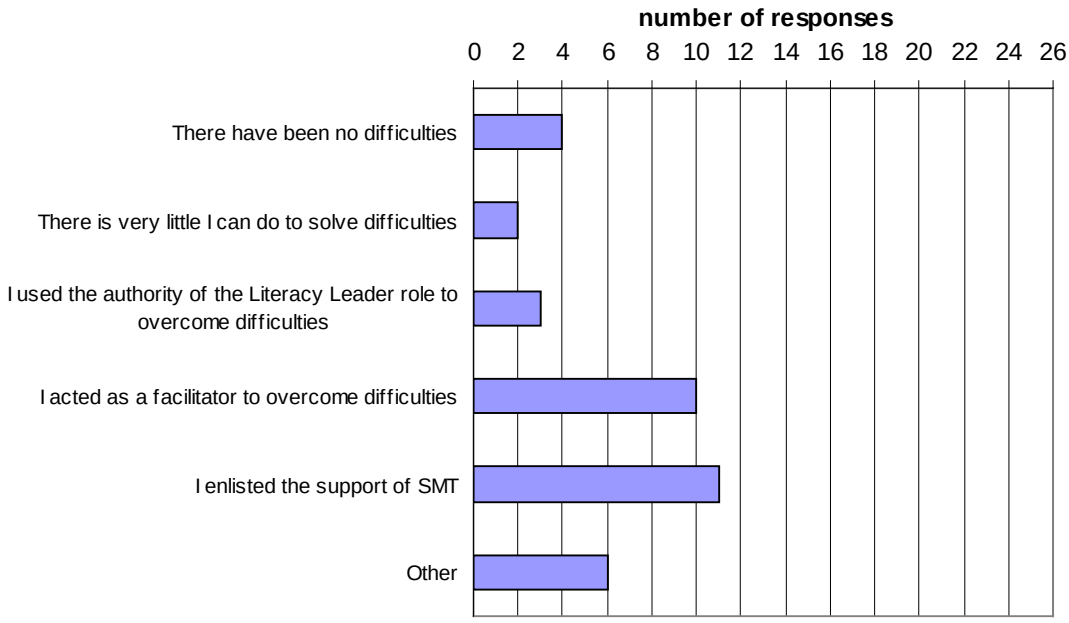
The majority of LLs reported becoming more optimistic about the project's potential to improve learning.

3.9–3.10: What do you think are the main reasons you were appointed to the LL role?



The most common reasons that LLs believed they were appointed to their role was their enthusiasm for teaching, their ability to form positive relationships and their credibility in the school. Other responses were typically linked to other similar roles that the teacher had, eg, "Linked to the SCT role that I already had".

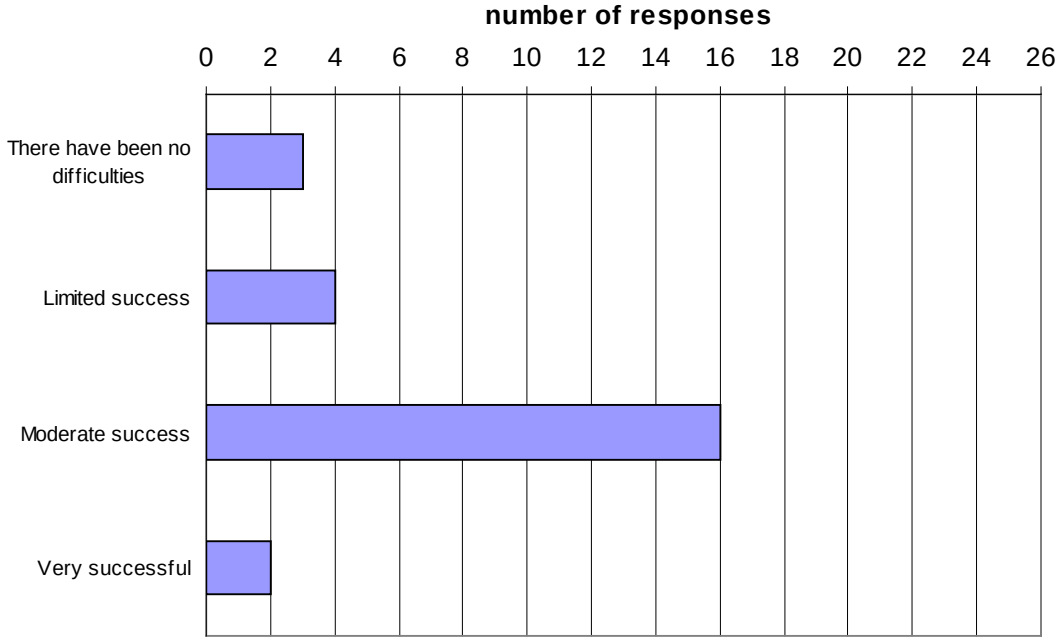
3.11: When there have been difficulties in carrying out your LL role with other teachers, what actions have you taken?



Typically, LLs took action to solve problems (only two claimed that there was very little they could do), and this was done through either using their personal role (mainly acting as a facilitator) or enlisting support from others such as the Senior Management Team.

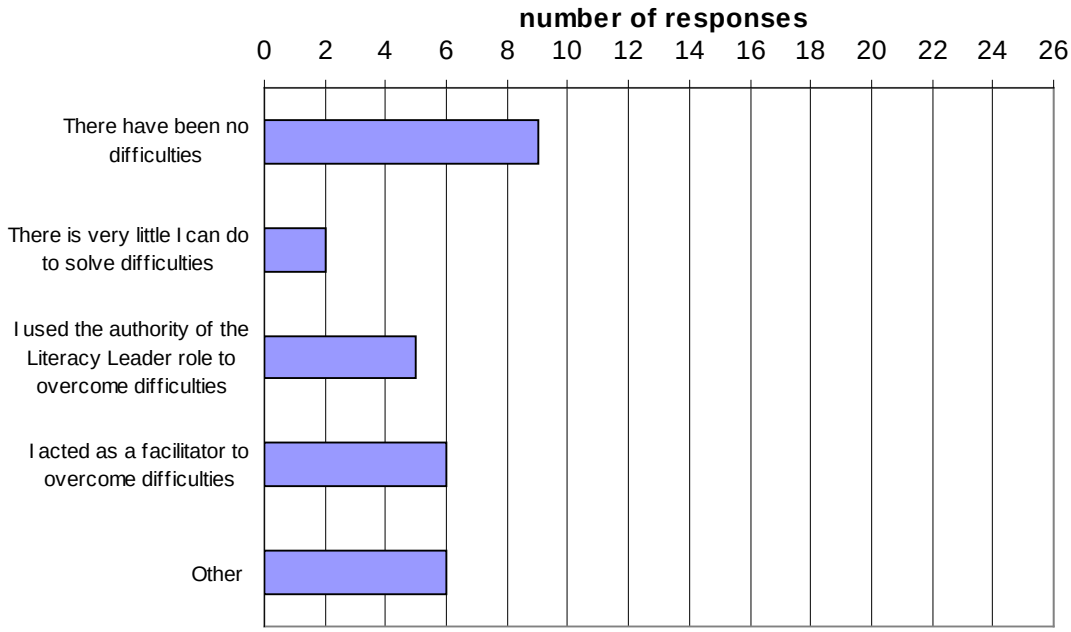
Other responses included enlisting support from other sources including the Principal, facilitator and Senior Management Team, and having meetings and one-to-one discussions with teachers.

3.12: How successful have you generally been solving difficulties with other teachers?



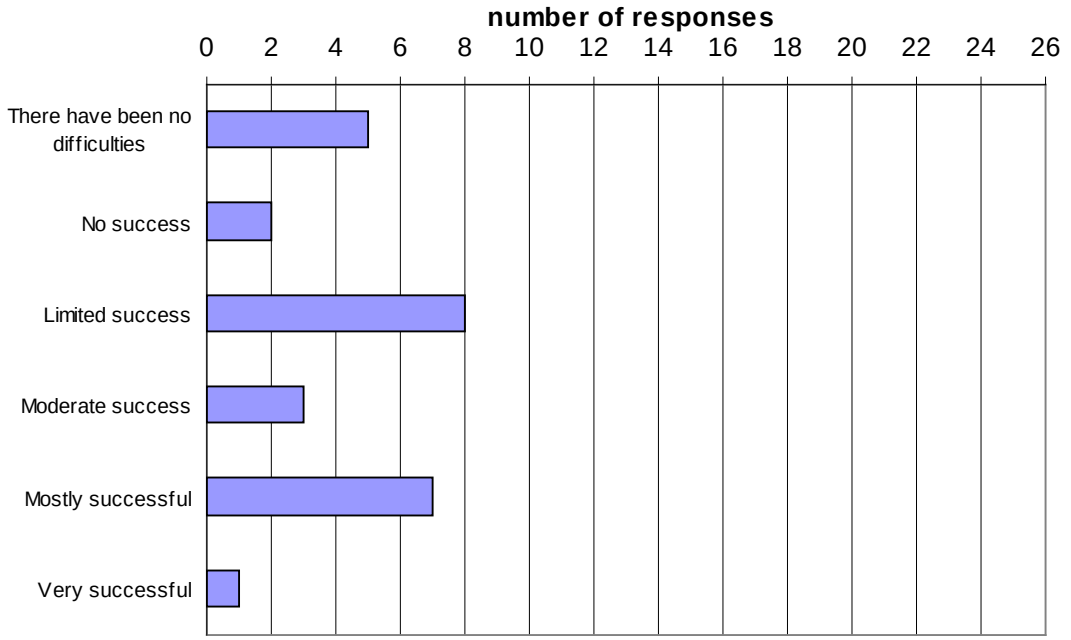
Most LLs were moderately successful with solving difficulties with other teachers. Only three claimed that there were no difficulties.

3.13: When there have been difficulties in carrying out your role in relation to school structures, what action have you taken?



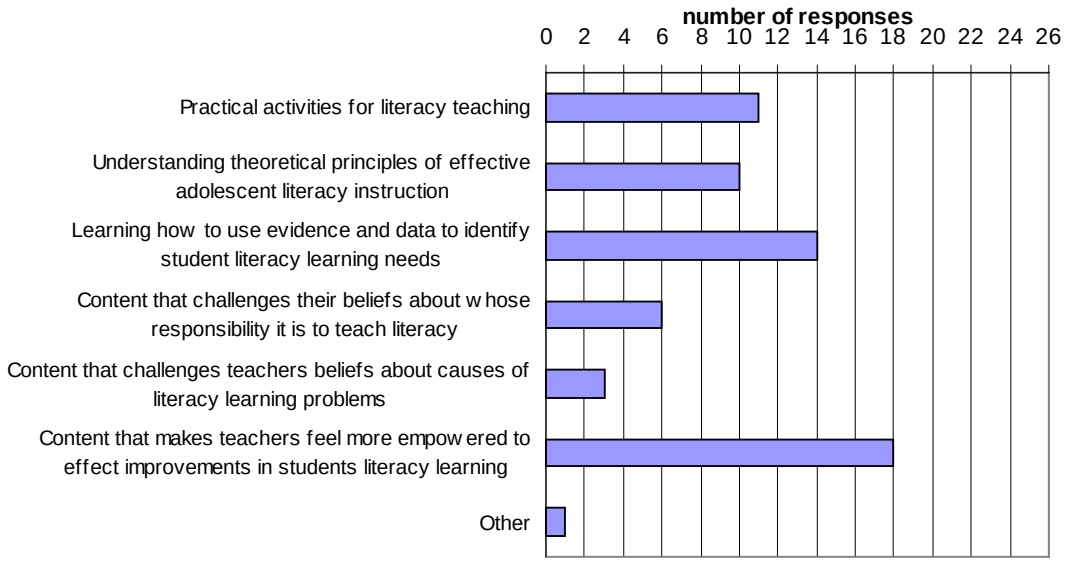
For nine LLs there were no difficulties in carrying out their role in relation to school structures. While some used their authority or acted as a facilitator to overcome difficulties, many of the 'other' responses also referred to enlisting support from other sources such as the Senior Management Team, external facilitator or Principal.

3.14: How successful have you generally been solving difficulties in relation to school structures and processes?



Many LLs claimed that they had only met limited success in solving difficulties in relation to school structures and processes, with only one claiming to have been very successful.

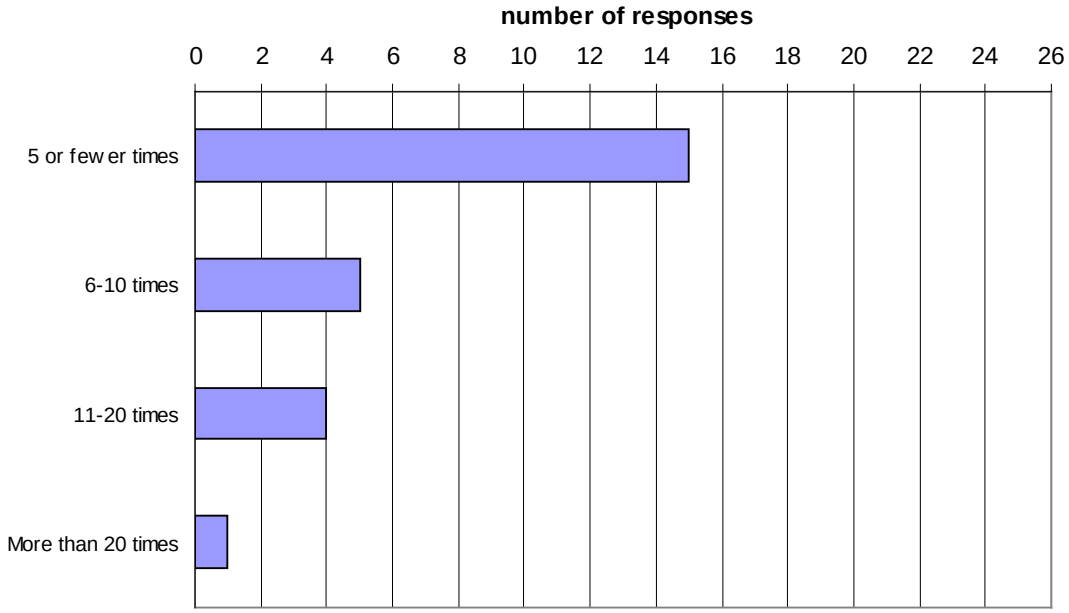
3.15: The most important professional learning Focus Group teachers need to be effective is...



The majority of LLs thought that the most important professional learning Focus Group teachers need is content that makes teachers feel more empowered in terms of improving their students' literacy learning. Many also thought that learning how to use evidence and data was important. Few LLs believed that content that challenged teachers' beliefs was important.

Section 4

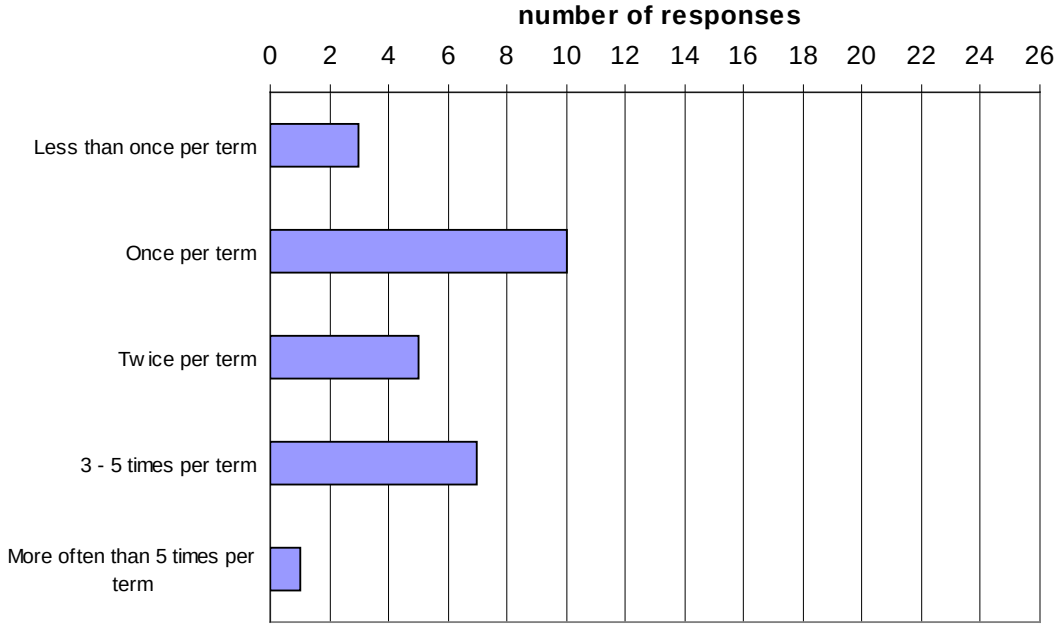
4.1: How many times in total have you met to discuss the SLP with the Principal or Senior Management Team?



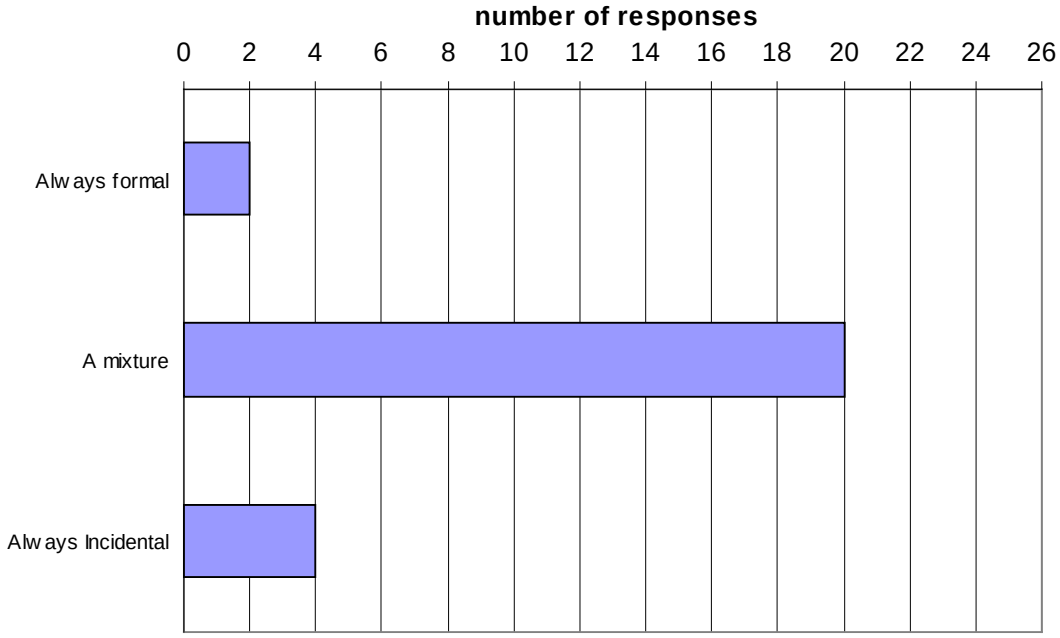
On average, LLs had met with the Principal or Senior Management Team eight times to discuss the SLP. There was a great amount of variation between LLs: 20 out of 26 had met ten or fewer times, while one had met 30–40 times. This is possibly due to the LLs' interpretation of the question – whether a casual chat or a formal meeting.

4.2–4.3: How regularly have you met to discuss SLP with the Principal or senior Management Team? Are these meetings formal or incidental?

Regularity:

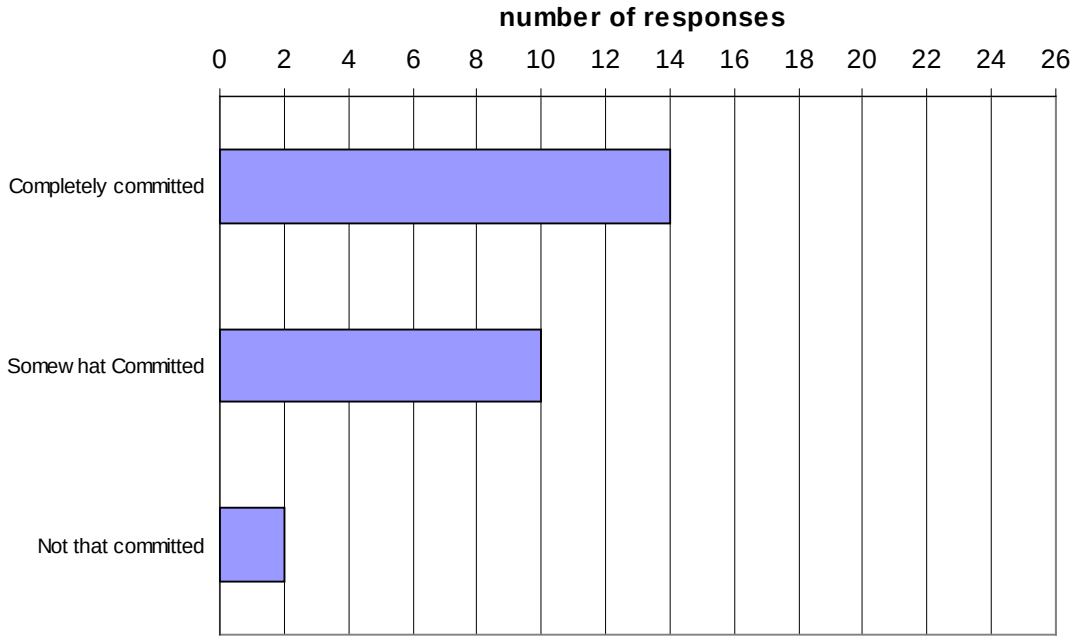


Formality:



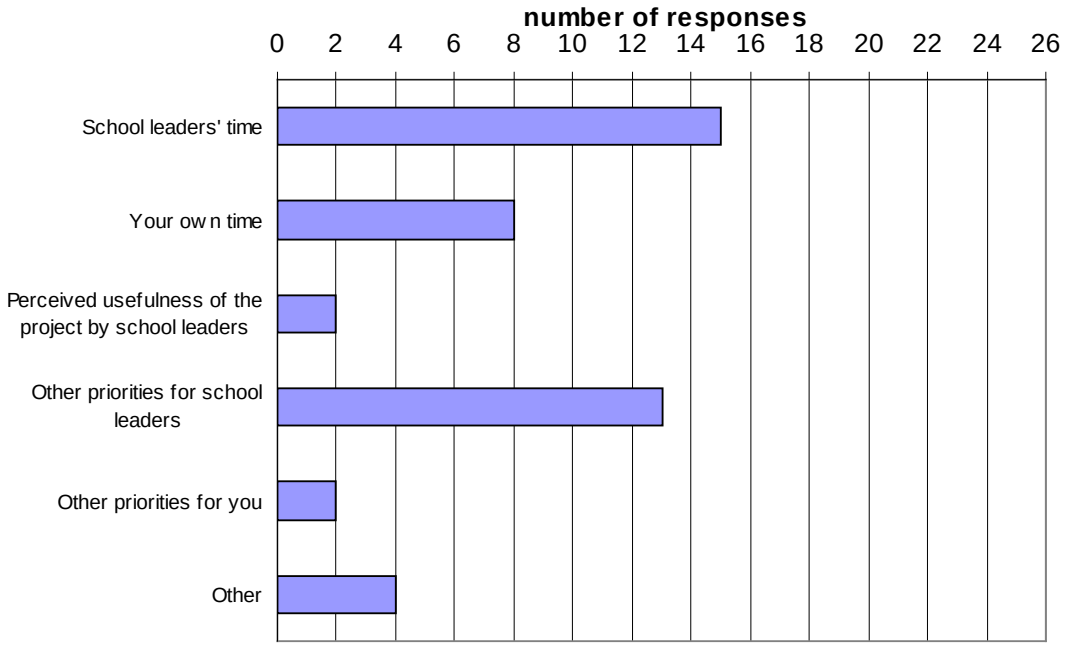
Most LLs met approximately once per term with the Principal or Senior Management Team to discuss SLP. Many explained that this included fewer formal meetings and many informal discussions, which is supported by the answers below where 20 of the 26 LLs claimed to have had a combination of formal and incidental meetings.

4.4: How would you rate the Principal's commitment to this project?



Most LLs rated their Principals as being committed to the project, with over half rating their Principals as completely committed.

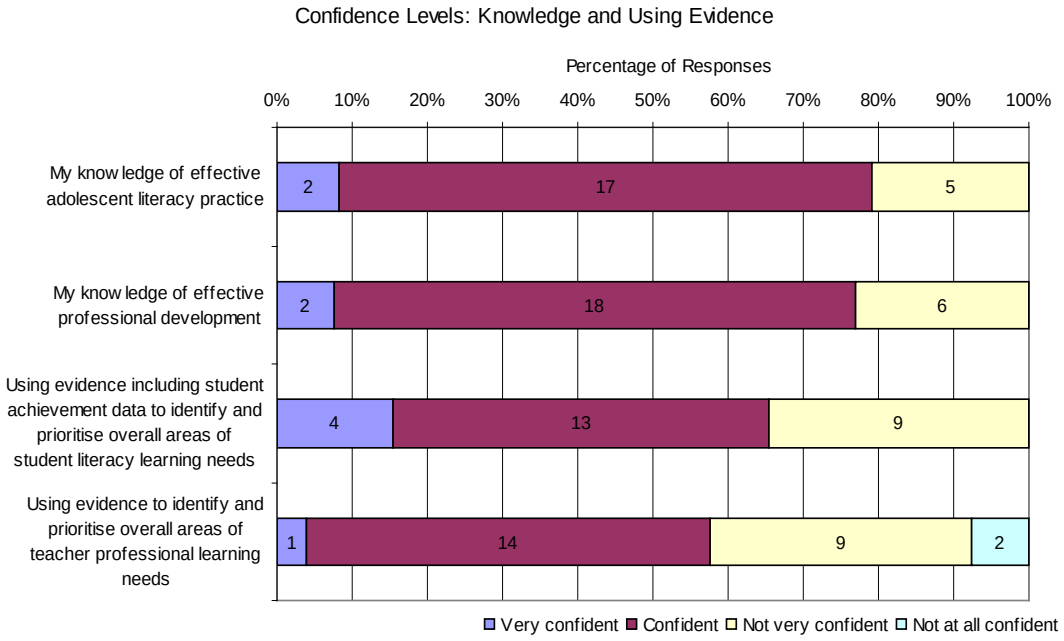
4.5–4.6: What are the main barriers when working with school leaders?



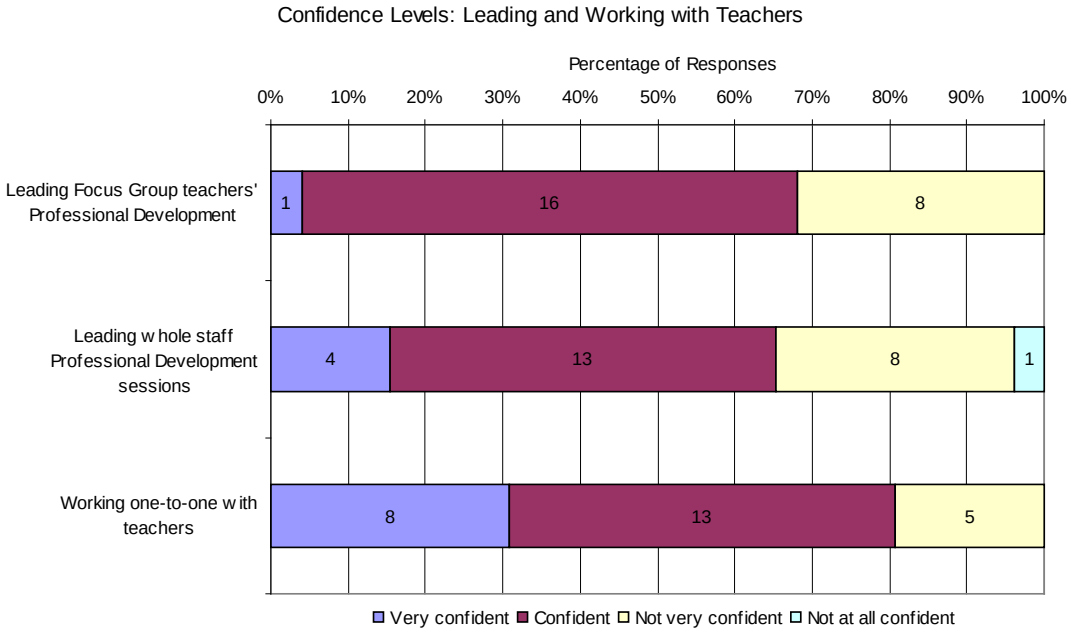
The most common barriers for LLs working with school leaders both related to the busy schedule of school leaders (school leaders' time and other priorities for school leaders). Fewer identified their own time as a barrier, and only two found that perceived usefulness of the project by school leaders was a barrier.

Section 5: Confidence

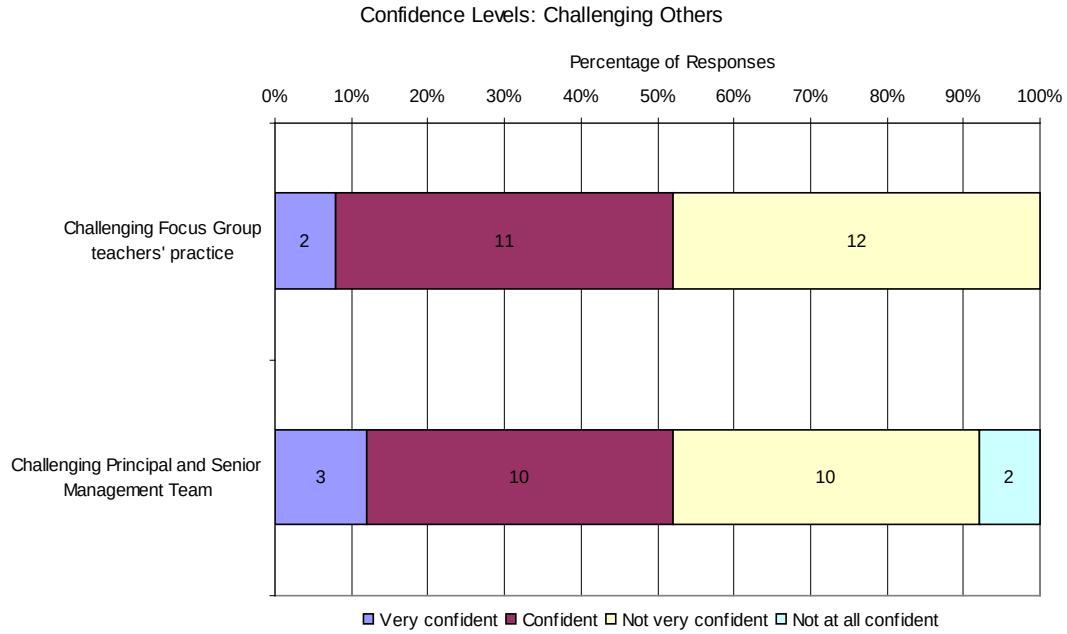
Overall, most LLs showed confidence throughout all areas. They seemed mostly confident with knowledge of practices and PD, working with teachers and building effective relationships. Challenging teachers, Principals and the Senior Management Team produced less confidence, with almost 50% having little or no confidence in doing this.



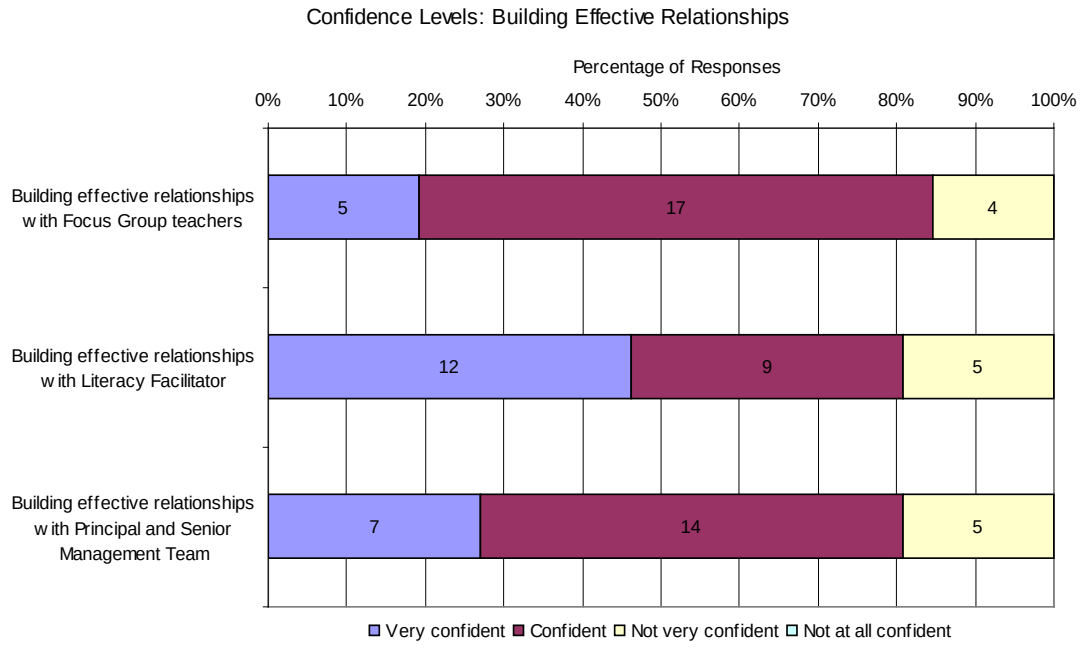
While most LLs were confident in their knowledge of effective literacy practice and professional development, fewer were confident in using evidence to identify student learning needs and teachers' professional learning needs.



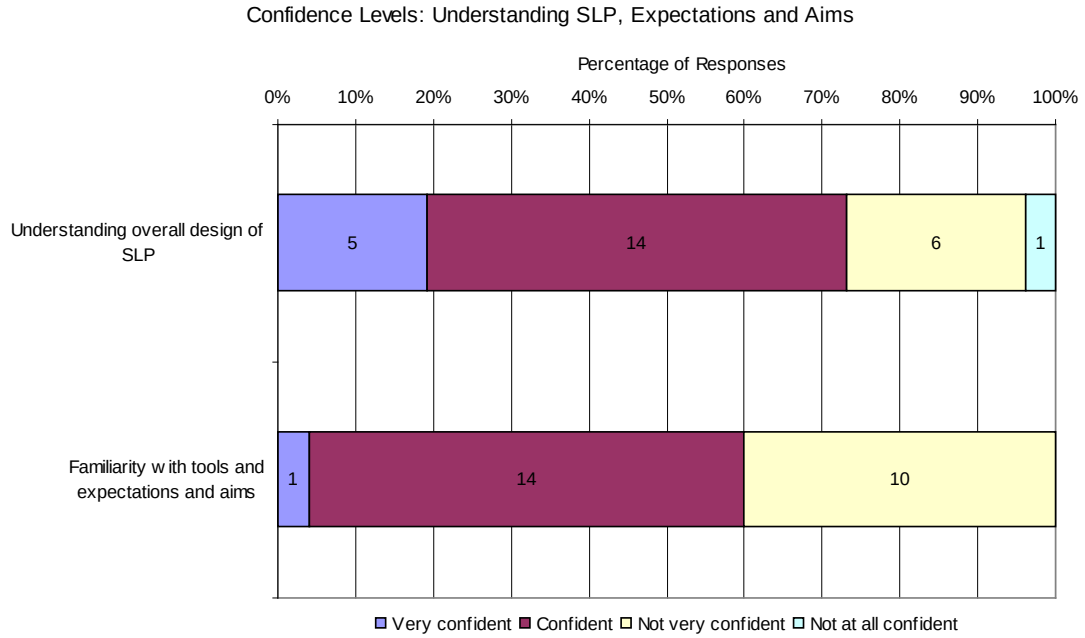
Most LLs were confident with working one-to-one with teachers, and fewer were confident with leading professional development sessions.



Slightly more than half the LLs were confident with challenging Focus Group teachers' practice or challenging the Principal and Senior Management Team.



The majority of LLs were confident or very confident when it came to building effective relationships; in particular, nearly 50% of LLs were confident in building effective relationships with the LF.



Most LLs were confident in their understanding of the overall design of SLP, while fewer were confident in their familiarity with the tools, expectations and aims of SLP. Over one third (10 of 25 respondents) claimed that they were not confident at all in their familiarity with the latter.

Literacy Leader Questionnaire Dimension Analysis in 2009

Demographics

Twenty-six LLs completed questionnaires. Sixteen of these had English as a main teaching subject, including those who taught another subject together with English (eg, Drama). Of the remaining teachers there was much variety: no two teachers taught the same subject area.

In terms of LLs' other roles, ten were Head of Department, two were Assistant Principal or Deputy Principal, and the remaining were in a wide variety of roles.

Analysis

Each questionnaire item was categorised along six dimensions.

- Breadth and intensity of implementation contained items such as the number of content areas taught by Focus Group teachers and the number and format of PD sessions
- Inquiry included the number of observations and discussions with teachers
- Coherence included how the SLP programme fitted in to the school and subject areas
- Leadership investment included the level of support provided by the school management team
- Content included the specific students, goals and areas of need which SLP were focused on. All but one of these items could not be quantified as high, medium or low, so a descriptive analysis is also provided
- Style of implementation included all other aspects of the implementation of SLP. These also could not be quantified.

Specific questionnaire items within each dimension are summarised in Table 19.

Table 19: Summary of Questionnaire Items

Dimension	Number	Question
Breadth		
	1.2	Which content areas do Focus Group teachers teach?
	1.4	How often have you met each group of Focus Group teachers for Professional Development (PD) sessions in 2009?
	1.5	How long do sessions typically run for?
	1.8	How often have you held PD sessions with the whole staff in 2009?
	1.9	How long on average did each whole-staff session last?
Coherence		
	1.13	How well has the SLP programme fitted in with other interventions and professional learning in you school?
	1.14	To what extent has the SLP programme been integrated into subject areas at Year 9?
Content		
	2.1–2.3	On what aspects have you focused as LL? What were the specific areas of need and how were they identified?
	2.4–2.5	The students we have focused on in our school have been...
	2.6	The SLP goals for student achievement in our school have been...
Inquiry		
	1.10–1.11	How many Focus Group teachers have you observed? And how many classroom observations in total would you have performed with Focus Group teachers?
	1.12	How many feedback / one-to-one discussion sessions in total have you had with Focus Group teachers?
Leadership		
	1.6	Is cover usually provided to allow sessions/meetings in class time?
	3.5	Compared with other roles in your school, the LL part of your role carries as much status as:
	4.2–4.3	How regularly have you met to discuss SLP with the Principal or senior Management Team? Are these meetings formal or incidental?
	4.4	How would you rate the Principal's commitment to this project?
Style		
	1.1	How have you selected Focus Group teachers at your school?
	1.3	How do Focus Group teachers meet?
	1.7	When you have led sessions with Focus Group teachers, how many teachers are expected to attend, and on average how many do attend each session?
	2.7	In relation to where you wanted to be at this point, please rank your progress toward meeting the goals described.
	3.1–3.2	In my role I have...
	3.3–3.4	What words would best describe how you see your role as LL?
	3.6	After nearly one year in the project, do you have more or less status in the school?
	3.7	After nearly one year in the project, are teachers overall more or less committed to literacy teaching?
	3.8	After nearly one year in the project, do you feel more or less optimistic about the potential of the project to improve student learning?
	3.9–3.10	What do you think are the main reasons you were appointed to the LL role?
	3.11	When there have been difficulties in carrying out your LL role with other teachers, what actions have you taken?
	3.12	How successful have you generally been solving difficulties with other teachers?
	3.13	When there have been difficulties in carrying out your role in relation to school structures, what action have you taken?
	3.14	How successful have you generally been solving difficulties in relation to school

Dimension	Number	Question
		structures and processes?
	3.15	The most important professional learning Focus Group teachers need to be effective is...
	4.1	How many times in total have you met to discuss the SLP with the Principal or Senior Management Team?
	4.5–4.6	What are the main barriers when working with school leaders?
	5	Confidence

Schools' responses to items within each dimension (apart from Content and Style) were each quantified as high implementation, medium implementation and low implementation. A numerical score was then assigned to these values, with high = 3, medium = 2 and low = 1. These values were then collated within each dimension and across all dimensions to produce total and average scores for each school.

Breadth

Five questionnaire items assessed the Breadth dimension. Table 20 summarises the Breadth dimension results of each school.

Table 20: Breadth Scores by School

School	1.2	1.4	1.5	1.8	1.9	Total	Average*
2	3	2	1	2	2	10	2.00
3	2	2	2	2	1	9	1.80
4	3	2	2	3	2	12	2.40
5	3	1	.	3	2	9	2.25
6	2	2	2	3	2	11	2.20
7	3	3	1	3	2	12	2.40
8	2	2	2	3	2	11	2.20
9	1	2	2	3	2	10	2.00
10	2	2	2	2	2	10	2.00
11	3	2	2	3	2	12	2.40
13	3	2	2	2	2	11	2.20
14	2	2	2	3	1	10	2.00
15	3	2	2	3	2	12	2.40
16	3	2	2	3	2	12	2.40
17	3	2	2	3	1	11	2.20
19	3	3	2	3	1	12	2.40
20	3	2	1	2	2	10	2.00
21	3	3	2	2	2	12	2.40
22	2	2	1	2	2	9	1.80
23	3	3	2	3	1	12	2.40
24	3	3	2	3	2	13	2.60
25	3	2	2	3	2	12	2.40
27	3	2	1	3	2	11	2.20
28	3	2	2	2	2	11	2.20
29	3	2	1	1	1	8	1.60
30	3	2	2	2	2	11	2.20
						Overall average	2.19

* The average ignores missing answers, eg, a school who only answered four of the five questions will have its total score divided by 4 rather than 5 in calculating the average.

Inquiry

Three questionnaire items assessed the Inquiry dimension. Table 21 summarises the Inquiry dimension results of each school.

Although each individual school's scores varied, overall average scores were identical for Inquiry and Breadth. There was more variation between schools in total Inquiry scores than in total Breadth scores, despite the fact that there were fewer items in the Inquiry dimension.

Table 21: Inquiry Scores by School

School	1.10	1.11	1.12	Total	Average*
2	2	2	2	6	2.00
3	2	2	3	7	2.33
4	3	3	3	9	3.00
5	2	3	3	8	2.67
6	2	2	2	6	2.00
7	1	2	2	5	1.67
8	2	3	3	8	2.67
9	3	3	3	9	3.00
10	1	2	2	5	1.67
11	2	3	2	7	2.33
13	3	3	2	8	2.67
14	3	3	2	8	2.67
15	.	2	2	4	2.00
16	2	2	2	6	2.00
17	2	3	2	7	2.33
19	1	2	2	5	1.67
20	1	2	2	5	1.67
21	1	2	2	5	1.67
22	1	1	2	4	1.33
23	2	2	2	6	2.00
24	3	3	3	9	3.00
25	1	2	2	5	1.67
27	1	2	2	5	1.67
28	3	3	3	9	3.00
29	2	2	2	6	2.00
30	3	2	2	7	2.33
				Overall average	2.19

* The average ignores missing answers, eg, a LL who only answered three of the four questions will have his/her total score divided by 3 rather than 4 in calculating the average.

Coherence

Two questionnaire items assessed the Coherence dimension. Table 22 summarises the Coherence dimension results of each school.

Table 22: Coherence Scores by School

School	1.13	1.14	Total	Average
2	2	2	4	2
3	.	2	2	2
4	2	2	4	2
5	2	2	4	2
6	2	3	5	2.5
7	3	3	6	3
8	3	2	5	2.5
9	1	2	3	1.5
10	1	2	3	1.5
11	2	3	5	2.5
13	2	3	5	2.5
14	2	2	4	2
15	3	2	5	2.5
16	2	2	4	2
17	1	1	2	1
19	1	2	3	1.5
20	2	2	4	2
21	2	2	4	2
22	3	2	5	2.5
23	1	2	3	1.5
24	2	2	4	2
25	2	2	4	2
27	2	2	4	2
28	2	2	4	2
29	2	3	5	2.5
30	3	2	5	2.5
			Overall average	2.08

Overall, schools had a slightly lower average score for Coherence than other dimensions, but most schools are still around an average of 2 (medium). There was also less variation between scores.

Leadership

Five questionnaire items assessed the Leadership dimension. Table 23 summarises the Leadership dimension scores of each school.

Table 23: Leadership Scores by School

School	1.6	3.5	4.2	4.3	4.4	Total	Average
2	1	3	2	2	3	11	2.2
3	3	2	2	2	2	11	2.2
4	3	2	2	1	3	11	2.2
5	2	2	2	3	2	11	2.2
6	3	3	3	2	3	14	2.8
7	1	2	2	2	3	10	2
8	3	2	3	1	2	11	2.2
9	1	2	3	2	2	10	2
10	3	2	3	2	3	13	2.6
11	3	2	3	2	3	13	2.6
13	3	3	3	2	3	14	2.8
14	2	2	1	1	2	8	1.6
15	2	2	2	2	3	11	2.2
16	3	2	2	2	3	12	2.4
17	3	2	2	2	2	11	2.2
19	2	2	2	2	3	11	2.2
20	1	2	2	2	3	10	2
21	2	2	3	2	3	12	2.4
22	3	2	2	2	2	11	2.2
23	3	2	2	3	3	13	2.6
24	1	1	3	2	2	9	1.8
25	2	2	2	2	2	10	2
27	3	2	1	2	2	10	2
28	3	2	2	2	1	10	2
29	1	2	1	1	1	6	1.2
30	2	2	3	2	3	12	2.4
						Total average	2.19

Overall average scores for Leadership were also identical to Inquiry and Breadth. Leadership scores had a similar amount of variation between schools as Inquiry scores.

Content

Six questionnaire items assessed the Content dimension. The first item could be quantified in the same way as the previous dimensions. The majority of schools ranked as high implementation with a score of 3 (Table 24).

Table 24: Content Scores by School

School	2.1
2	3
3	3
4	3
5	3
6	3
7	1
8	1
9	2
10	1
11	3
13	3
14	3
15	2
16	3
17	3
19	3
20	3
21	3
22	2
23	3
24	1
25	1
27	3
28	3
29	2
30	3

The five remaining items within the Content dimension are, like Style, not quantifiable.

Totals

The four quantifiable dimensions (Breadth, Inquiry, Coherence and Leadership), plus the one score that could be quantified from Content, were collated to create an overall total (Table 25) and an overall average (Table 26).

Totals and Averages differ in their weighting within each dimension. Total scores are higher for dimensions containing a larger number of items (Breadth and Leadership) and lower for dimensions with a smaller number of items (Content, Inquiry and Coherence). Average scores are created by dividing the total score by the number of items; therefore each dimension has equal weighting in the overall average.

Table 25: Total Scores by School

School	Breadth	Inquiry	Coherence	Content	Leadership	Total
6	11	6	5	3	14	39
9	10	9	3	2	10	34
5	9	8	4	3	11	35
3	9	7	2	3	11	32
2	10	6	4	3	11	34
4	12	9	4	3	11	39
8	11	8	5	1	11	36
21	12	5	4	3	12	36
22	9	4	5	2	11	31
19	12	5	3	3	11	34
20	10	5	4	3	10	32
25	12	5	4	1	10	32
24	13	9	4	1	9	36
23	12	6	3	3	13	37
16	12	6	4	3	12	37
15	12	4	5	2	11	34
17	11	7	2	3	11	34
14	10	8	4	3	8	33
13	11	8	5	3	14	41
7	12	5	6	1	10	34
11	12	7	5	3	13	40
10	10	5	3	1	13	32
28	11	9	4	3	10	37
27	11	5	4	3	10	33
29	8	6	5	2	6	27
30	11	7	5	3	12	38
Mean Total Score	10.88	6.50	4.08	2.46	10.96	34.88

Table 26: Average Scores by School

School	Breadth	Inquiry	Coherence	Content	Leadership	Total
6	2.20	2.00	2.50	3.00	2.80	2.50
9	2.00	3.00	1.50	2.00	2.00	2.10
5	2.25	2.67	2.00	3.00	2.20	2.42
3	1.80	2.33	2.00	3.00	2.20	2.27
2	2.00	2.00	2.00	3.00	2.20	2.24
4	2.40	3.00	2.00	3.00	2.20	2.52
8	2.20	2.67	2.50	1.00	2.20	2.11
21	2.40	1.67	2.00	3.00	2.40	2.29
22	1.80	1.33	2.50	2.00	2.20	1.97
19	2.40	1.67	1.50	3.00	2.20	2.15
20	2.00	1.67	2.00	3.00	2.00	2.13
25	2.40	1.67	2.00	1.00	2.00	1.81
24	2.60	3.00	2.00	1.00	1.80	2.08
23	2.40	2.00	1.50	3.00	2.60	2.30
16	2.40	2.00	2.00	3.00	2.40	2.36
15	2.40	2.00	2.50	2.00	2.20	2.22
17	2.20	2.33	1.00	3.00	2.20	2.15
14	2.00	2.67	2.00	3.00	1.60	2.25
13	2.20	2.67	2.50	3.00	2.80	2.63
7	2.40	1.67	3.00	1.00	2.00	2.01
11	2.40	2.33	2.50	3.00	2.60	2.57
10	2.00	1.67	1.50	1.00	2.60	1.75
28	2.20	3.00	2.00	3.00	2.00	2.44
27	2.20	1.67	2.00	3.00	2.00	2.17
29	1.60	2.00	2.50	2.00	1.20	1.86
30	2.20	2.33	2.50	3.00	2.40	2.49
Mean Average Score	2.19	2.19	2.08	2.46	2.19	2.22

Figure 7: Average scores across all dimensions by school

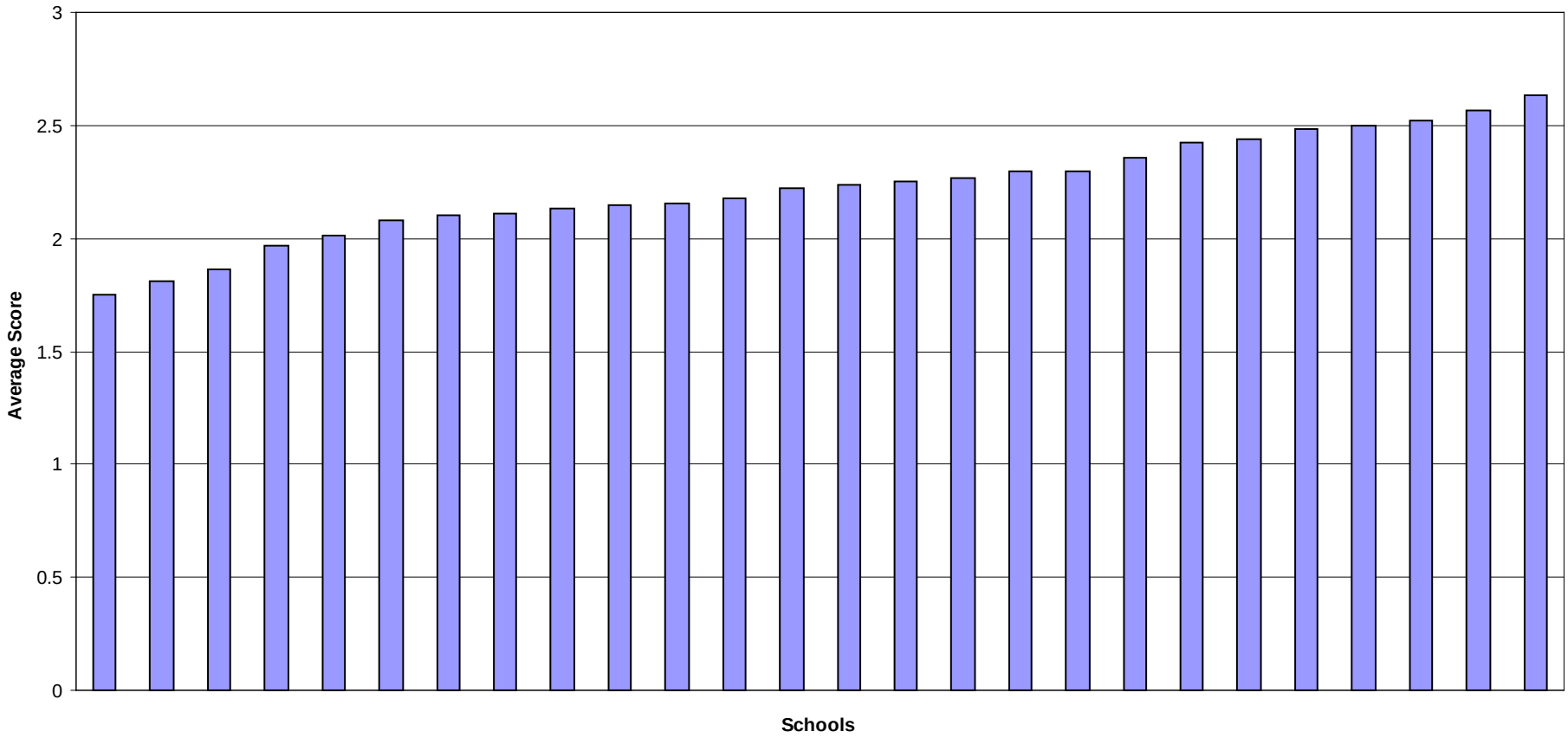
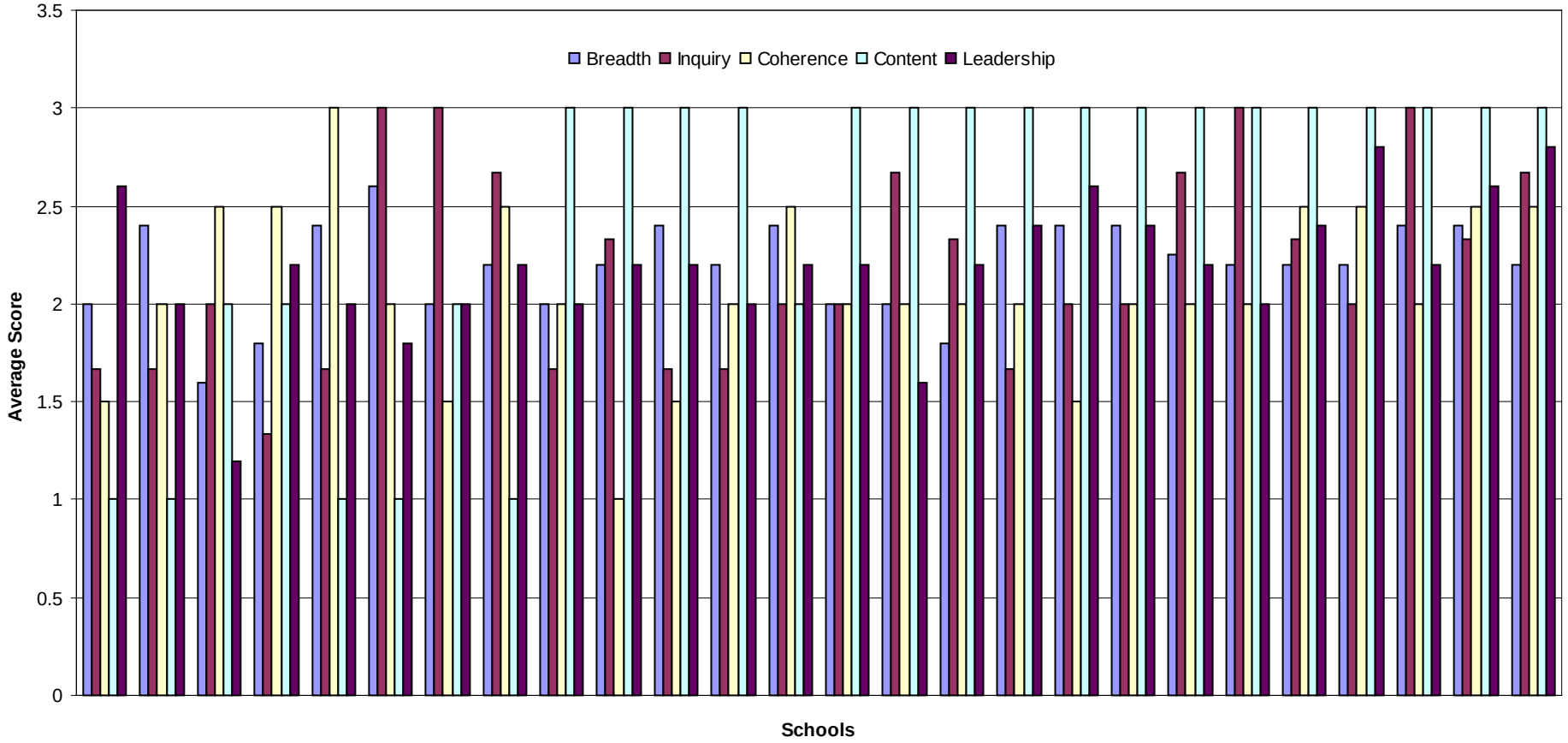


Figure 8: Average scores for each dimension by school



Style

The remaining 36 questionnaire items assessed the Style dimension. Questions which make up the 'style' dimension are generally not quantifiable as high, medium or low. Therefore these items are not included in the calculation of the Total scores.

Literacy Leader Questionnaire Comparison with Student Achievement Data in 2009

Demographics

Twenty-six LLs completed questionnaires. Of these, two did not have any students in the student sample.

Student achievement data (e-asTTle Reading) was collected for Years 9 and 10 in 30 schools at the beginning and end of 2009. The sample used here comprised only those students who sat both beginning and end of year tests. Additionally, only those students whose beginning of year writing levels were at 3A and below were selected for this sample.

Two of the 30 schools did not have any students in the remaining sample (either their students were not at 3A and below or did not sit both tests). Of these, only 24 had also completed Literacy Leader questionnaires. Therefore the current analysis is of 24 LLs and their schools' achievement data. Table 27 below shows the details for each school.

Table 27: Detail for Each School

School	Questionnaire	Achievement Data (3A and Below Sample)	Current Analysis
1	-	✓	-
2	✓	✓	✓
3	✓	✓	✓
4	✓	✓	✓
5	✓	✓	✓
6	✓	✓	✓
7	-	✓	-
8	✓	✓	✓
9	✓	✓	✓
10	✓	✓	✓
11	✓	✓	✓
12	✓	✓	✓
13	✓	✓	✓
14	✓	✓	✓
15	✓	✓	✓
16	✓	✓	✓
17	✓	✓	✓
18	-	✓	-
19	✓	✓	✓
20	✓	✓	✓
21	✓	✓	✓
22	✓	✓	✓
23	✓	✓	✓
24	✓	✓	✓
25	✓	✓	✓
26	-	✓	-
27	✓	-	-
28	✓	✓	✓
29	✓	-	-
30	✓	✓	✓

Correlations: Questionnaire Dimensions

Five quantifiable dimensions were identified in the Literacy Leader questionnaire: Breadth, Inquiry, Coherence, Leadership and Content. Each school received an average score for each dimension, plus an overall average comprising these.

These dimensions were first inter-correlated to see whether associations existed between them. None of the dimensions significantly correlated with the overall average. Altogether this suggests that each dimension is quite a different aspect of implementation and should therefore be treated separately. Therefore the remaining analyses are conducted for each dimension separately in addition to the overall average.

Correlations: Questionnaire Dimensions and Student Achievement Data

Each of the questionnaire dimensions was correlated with student achievement data. Beginning and end of 2009 mean score and gains were correlated separately for Year 9 and Year 10. Additionally, beginning and end mean score and

gains were conducted for Year 9 and Year 10 Māori and Pasifika students. Correlations were also conducted with mean gains across Years 9 and 10 combined (as the same gain score is expected for both Year 9 and Year 10).

Inquiry was the only dimension to be significantly correlated with achievement. Schools that were high on inquiry were associated with lower end of year scores and gains for Year 10 Māori and Pasifika students. Perhaps at lower achieving schools, the need for inquiry into teachers' practices is greater.

T tests: Questionnaire Dimensions and Student Achievement Data

Each of the questionnaire dimensions was then re-analysed in a different way. Schools were given a score of either high or low on each dimension (plus the overall average). These were determined by a median split such that the schools with scores at or below the median were categorised as 'low', and schools with scores above the median were categorised as 'high'. (The one exception to this rule was in the case of Content, where the median score was also the maximum score of 3. In this case, schools at the median of 3 were categorised as 'high', and schools with scores below 3 were categorised as 'low'.)

An independent samples *t* test was then conducted in order to test whether there was a difference in achievement pattern between high and low scoring schools for each dimension. Achievement data breakdowns were the same as for above (beginning, end and gains for Years 9 and 10 separately and for Māori and Pasifika students, plus overall gains).

As in the correlations, Inquiry was the only dimension significantly related to achievement. Schools that were higher on Inquiry had significantly lower achievement for Māori and Pasifika Year 10 students at the end of the year.

T tests: Reasons Why Chosen

Question 3.9 asks LLs why they think they were appointed to their role. One of the possible responses is 'My knowledge of effective literacy practice'. We compared the achievement data of schools whose LLs answered yes to this response with those who answered no. Results were mixed. Beginning of year scores for Year 10 students, and Year 10 Māori and Pasifika students, were significantly higher for those who answered yes. On the other hand, gains for all Year 9 students, and end of year scores for Year 10 Māori and Pasifika students, were significantly lower for those who answered yes.

T tests: Number of Constraints

Question 4.5 asks LLs to select from a list of items that may be considered constraints. LLs may select any or all of the possible constraints. The number of constraints selected was totalled for each school. Data was then split so that schools at or below the median number of constraints were categorised as 'low', and schools above the median were categorised as 'high'. A paired *t* test was then conducted to investigate whether a high number of constraints had an effect on student achievement.

Only one significant result was found. Year 9 Māori and Pasifika end of year scores were significantly higher for schools with a relatively low number of constraints.

T tests: Class or Other Focus

Question 1.1 asks LLs how Focus Group teachers were chosen. Of these, one possible response was 'Core teachers of a particular class'. One aspect of effective SLP implementation may be choosing Focus Group teachers based on the achievement of particular students and classes. Therefore we conducted a paired *t* test to investigate whether schools that selected 'Core teachers of a particular class' would have greater student achievement than other schools.

Several significant results were found. For those that did select Focus Group teachers as teachers of a particular class, student achievement was significantly higher for Year 9 students at the beginning of the year and Year 10 students at

the end of the year, and for Year 10 Māori and Pasifika students at both the beginning and end of the year. While selecting Focus Group teachers who taught a particular class did not have any relationship with gains, it seems to be associated with higher achievement levels in general.

T tests: Specific or Non-Specific Student Focus

Question 2.4 asked LLs which students their school focused on in SLP. Schools were categorised as having a specific focus if they selected 'All Māori and Pasifika students' and/or 'The lowest achieving Māori and Pasifika students at our school'. Schools that did not select these particular foci were categorised as having a non-specific focus. These two groups were compared using independent samples *t* tests to assess whether the specificity of focus was related to student achievement. No significant differences were found. This indicates that either the specificity is not related to achievement, or that the questionnaire item may not be sensitive enough to assess this aspect.

T tests: Student Inquiry

Question 3.1 asked LLs what they had done in their role. In order to look at student inquiry, those who specified 'Inquired into literacy achievement in the school' as one of the three most important aspects of their role were categorised as being high on student inquiry. No significant differences were found using an independent samples *t* test. More depth may be revealed in the analysis of interviews with teachers.

School by School Breakdown

The results for each school individually are in Table 28.

Table 28: Results Summary for Each School

School	Class or Other Focus	Student Focus	Chosen for Knowledge	Number of Constraints	Student Inquiry
2	Other	Non-Specific	No	high	low
3	Class	Specific	Yes	high	low
4	Other	Specific	No	low	high
5	Other	Specific	No	high	low
6	Class	Specific	Yes	high	low
7	Other	Specific	No	low	high
8	Class	Non-Specific	Yes	high	low
9	Other	Specific	Yes	high	low
10	Other	Non-Specific	No	low	high
11	Other	Specific	No	high	high
13	Other	Specific	No	low	low
14	Class	Non-Specific	No	low	low
15	Other	Specific	Yes	high	low
16	Other	Non-Specific	No	high	high
17	Other	Non-Specific	No	low	high
19	Class	Non-Specific	Yes	high	low
20	Class	Non-Specific	No	low	low
21	Class	Specific	Yes	low	high
22	Class	Non-Specific	No	low	low
23	Class	Specific	No	low	low
24	Other	Non-Specific	No	low	high
25	Class	Specific	No	low	high
27	Class	Non-Specific	No	low	high
28	Class	Specific	No	high	high
29	Other	Non-Specific	No	high	high
30	Other	Non-Specific	No	low	low

Appendix D: Literacy Leader Questionnaire Compared to e-asTTle Results by Dimension in 2009

Table 29: Summary of T Tests between Schools that had Low and High Breadth Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Average Gain	13	90.04	37.72	11	70.61	38.01	1.25	22	0.22
Year 9									
Term 1	13	1498.03	27.64	10	1494.14	25.89	0.34	21	0.73
Term 4	13	1583.27	37.35	10	1555.75	40.89	1.68	21	0.11
Gain	13	85.24	39.86	10	61.61	44.01	1.35	21	0.19
Year 10									
Term 1	12	1500.58	36.17	9	1508.06	29.54	-0.51	19	0.62
Term 4	12	1601.21	46.91	9	1598.76	34.36	0.13	19	0.90
Gain	12	100.63	48.52	9	90.70	28.60	0.54	19	0.59

Table 30: Summary of T Tests between Schools that had Low and High Breadth Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Year 9									
Term 1	13	1493.46	28.99	10	1496.94	29.21	-0.28	21	0.78
Term 4	13	1576.40	21.76	10	1561.33	40.38	1.07	12.98	0.31
Gain	13	82.95	35.00	10	64.39	41.53	1.16	21	0.26
Year 10									
Term 1	11	1508.29	29.95	9	1503.95	39.22	0.28	18	0.78
Term 4	11	1601.36	57.47	9	1602.83	72.68	-0.05	18	0.96
Gain	11	93.07	37.63	9	98.87	51.41	-0.29	18	0.77

Table 31: Summary of T Tests between Schools that had Low and High Inquiry Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Average Gain	12	79.56	39.98	12	82.70	38.29	-0.20	22	0.85
Year 9									
Term 1	11	1498.63	20.08	12	1494.24	31.83	0.39	21	0.70
Term 4	11	1571.06	41.02	12	1571.54	41.82	-0.03	21	0.98
Gain	11	72.42	48.61	12	77.30	38.00	-0.27	21	0.79
Year 10									
Term 1	10	1513.85	27.37	11	1494.64	36.03	1.37	19	0.19
Term 4	10	1615.02	34.46	11	1586.66	43.33	1.65	19	0.12
Gain	10	101.17	21.53	11	92.02	53.24	0.51	19	0.62

Table 32: Summary of T Tests between Schools that had Low and High Inquiry Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Year 9									
Term 1	11	1496.92	23.54	12	1493.19	33.32	0.31	21	0.76
Term 4	11	1569.79	33.78	12	1569.91	30.50	-0.01	21	0.99
Gain	11	72.87	40.15	12	76.71	38.10	-0.24	21	0.82
Year 10									
Term 1	10	1515.98	32.40	10	1496.69	33.43	1.31	18	0.21
Term 4	10	1629.92	67.09	10	1574.12	46.22	2.17	18	0.04
Gain	10	113.94	46.70	10	77.43	31.94	2.04	18	0.06

Table 33: Summary of T Tests between Schools that had Low and High Coherence Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Average Gain	16	86.47	42.00	8	70.47	29.14	0.96	22	0.35
Year 9									
Term 1	15	1494.12	26.42	8	1500.50	27.53	-0.54	21	0.59
Term 4	15	1574.53	39.17	8	1565.26	44.94	0.51	21	0.61
Gain	15	80.41	44.81	8	64.76	38.28	0.84	21	0.41
Year 10									
Term 1	13	1504.46	35.36	8	1502.70	30.80	0.12	19	0.91
Term 4	13	1608.44	34.45	8	1586.72	49.43	1.19	19	0.25
Gain	13	103.99	47.54	8	84.02	23.47	1.10	19	0.28

Table 34: Summary of T Tests between Schools that had Low and High Coherence Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Year 9									
Term 1	15	1494.17	29.60	8	1496.47	28.15	-0.18	21	0.86
Term 4	15	1577.01	33.22	8	1556.43	23.87	1.54	21	0.14
Gain	15	82.83	40.44	8	59.96	30.59	1.40	21	0.18
Year 10									
Term 1	12	1506.18	36.19	8	1506.57	31.52	-0.02	18	0.98
Term 4	12	1609.10	66.57	8	1591.40	59.83	0.61	18	0.55
Gain	12	102.92	48.99	8	84.83	32.75	0.91	18	0.37

Table 35: Summary of T Tests between Schools that had Low and High Leadership Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Average Gain	8	85.90	34.80	16	78.75	40.84	0.42	22	0.68
Year 9									
Term 1	8	1496.57	5.04	15	1496.22	32.85	0.04	15.20	0.97
Term 4	8	1577.33	45.09	15	1568.09	39.08	0.51	21	0.61
Gain	8	80.76	43.68	15	71.88	43.00	0.47	21	0.64
Year 10									
Term 1	7	1510.36	26.04	14	1500.50	36.31	0.64	19	0.53
Term 4	7	1602.99	31.23	14	1598.75	46.20	0.22	19	0.83
Gain	7	92.63	33.64	14	98.25	44.73	-0.29	19	0.77

Table 36: Summary of T Tests between Schools that had Low and High Leadership Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Year 9									
Term 1	8	1490.95	6.41	15	1497.11	35.20	-0.66	15.67	0.52
Term 4	8	1568.62	38.41	15	1570.50	28.41	-0.13	21	0.89
Gain	8	77.67	37.11	15	73.39	40.03	0.25	21	0.80
Year 10									
Term 1	7	1503.93	33.64	13	1507.63	34.78	-0.23	18	0.82
Term 4	7	1597.76	44.40	13	1604.32	72.62	-0.22	18	0.83
Gain	7	93.82	38.80	13	96.69	46.91	-0.14	18	0.89

Table 37: Summary of T Tests between Schools that had Low and High Content Dimension Scores

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Average Gain	7	98.99	38.83	17	73.78	36.72	1.50	22	0.15
Year 9									
Term 1	7	1498.45	15.17	16	1495.41	30.40	0.25	21	0.81
Term 4	7	1493.40	37.72	14	1508.98	30.37	-1.02	19	0.32
Gain	7	1592.00	36.21	16	1562.25	39.91	1.69	21	0.11
Year 10									
Term 1	7	1601.76	30.34	14	1599.37	46.52	0.12	19	0.90
Term 4	7	93.55	33.23	16	66.84	44.39	1.42	21	0.17
Gain	7	108.36	60.12	14	90.39	27.40	0.95	19	0.35

Table 38: Summary of T Tests between Schools that had Low and High Content Dimension Scores for Māori and Pasifika Students

Variable	Low			High			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
Year 9									
Term 1	7	1490.70	17.73	16	1496.84	32.42	-0.47	21	0.64
Term 4	6	1493.22	31.37	14	1511.96	33.93	-1.16	18	0.26
Gain	7	1582.32	32.82	16	1564.39	30.13	1.28	21	0.21
Year 10									
Term 1	6	1579.97	27.76	14	1611.47	71.94	-1.03	18	0.32
Term 4	7	91.62	30.25	16	67.55	39.88	1.42	21	0.17
Gain	6	86.75	36.97	14	99.51	46.37	-0.59	18	0.56

Appendix E: Literacy Facilitator Questionnaire Analysis in 2009

Table 39: Summary Statistics for All Questions

Question	N	M	SD	Mdn	Min	Max
1	41	3.41	0.81	4.00	Less than what could be reasonably expected	A lot more than what could be reasonably expected
2	43	2.93	0.80	3.00	Considerably less than what could be expected	More than what could be reasonably expected
3	40	2.93	0.62	3.00	Less than what could be reasonably expected	More than what could be reasonably expected
4	41	3.05	1.16	3.00	Considerably less than what could be expected	A lot more than what could be reasonably expected
5	42	3.64	0.91	4.00	Less than what could be reasonably expected	A lot more than what could be reasonably expected
6	41	3.15	0.96	3.00	Less than what could be reasonably expected	A lot more than what could be reasonably expected
7	37	2.76	1.01	3.00	Considerably less than what could be expected	A lot more than what could be reasonably expected
8	43	2.98	1.03	3.00	Less than what could be reasonably expected	A lot more than what could be reasonably expected
9	39	2.64	0.99	3.00	Considerably less than what could be expected	A lot more than what could be reasonably expected
10	43	2.93	0.80	3.00	Less than what could be reasonably expected	A lot more than what could be reasonably expected
11	43	3.98	0.83	4.00	Little	Very precisely
12	43	3.58	1.03	4.00	Little	Very precisely
13	39	3.49	1.14	3.00	Very little	Very precisely
14	43	4.21	0.74	4.00	Average	Very precisely
15	43	3.72	0.88	4.00	Little	Very precisely
16	38	3.47	1.13	3.50	Very little	Very precisely
17	41	3.20	0.93	3.00	Little	Very precisely
18	35	2.97	1.01	3.00	Very little	Very precisely
19	43	3.21	0.74	3.00	Less than once per term	More than three times per term
20	43	3.79	1.10	4.00	One–two hours	Five hours or more
21	43	3.30	0.83	4.00	2–3	6–7
22	43	4.79	0.41	5.00	Three–five hours	Five hours or more

Appendix F: Results of the 2010 Literacy Facilitator Questionnaire by Region

Table 40: Themes and Questions for the Literacy Facilitator Questionnaire

Theme	Questions from the Questionnaire
Facilitator Schooling Support Service	Q19, Q20, Q21, Q22
Inquiry in Teacher	Q2, Q14
Inquiry in Student	Q11
Intensity	Q1–Q4, Q19–Q22
Leadership	Q5, Q10
Māori and Pasifika student focus	Q6–Q9, Q12, Q13, Q15–Q18
PLC Focus Group	Q1, Q3
PLCs Whole Staff	Q4

Table 41: The Literacy Facilitator Questionnaire Questions

1	This year, how much PD has the LL delivered in Focus Group meetings given the SLP model/resourcing?
2	This year, how many classroom observations were conducted with Focus Group teachers given the SLP model/resourcing?
3	This year, how much individualised PD did Focus Group teachers given the SLP model/resourcing? (eg, feedback, one-to-one planning sessions)
4	This year, how much PD has the LL delivered to non-Focus Group teachers (eg, staff meetings) given the SLP model/resourcing?
5	To what extent has the Principal and SMT actively supported SLP given the SLP model/resourcing?
6	To what extent has the inquiry in Focus Group meetings focused specifically on Māori students?
7	To what extent has the inquiry in Focus Group meetings focused specifically on Pasifika students?
8	To what extent has content about effective literacy teaching focused specifically on Māori students?
9	To what extent has content about effective literacy teaching focused specifically on Pasifika students?
10	How successfully has SLP been integrated with other interventions in the school? (eg, NZC implementation, Te Kotahitanga)
11	How precisely does the Literacy Leader understand patterns of student literacy achievement and progress in the school?
12	How precisely does the Literacy Leader understand patterns in the achievement and progress of your Māori students in particular?
13	How precisely does the Literacy Leader understand patterns in the achievement and progress of your Pasifika students in particular?
14	How precisely does the Literacy Leader understand how literacy teaching in your school impacts on students' achievement?
15	How precisely does the Literacy Leader understand how literacy teaching in your school impacts on the achievement of Māori students in particular?
16	How precisely does the Literacy Leader understand how literacy teaching in your school impacts on the achievement of Pasifika students in particular?
17	How precisely does the Literacy Leader understand why different Focus Group teachers have been more and less effective in raising achievement of Māori students?
18	How precisely does the Literacy Leader understand why different Focus Group teachers have been more and less effective in raising achievement of Pasifika students?
19	About how often per term have you visited the school to provide PD this year?
20	On average, how much time do you spend in your school per visit?
21	How many regional meetings (led by your local Schooling Support Service) have you attended this year?
22	About how long did each regional meeting last?

Table 42: Region 1 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	14	3.95	0.41	4.13	3.00	4.25
Inquiry in Student	14	3.86	0.46	3.50	3.50	4.50
Inquiry in Teacher	14	4.00	1.04	4.00	2.00	5.00
Intensity	14	3.54	0.34	3.38	3.13	4.13
Leadership	14	3.21	0.61	3.00	2.50	4.00
Māori and Pasifika student focus	14	3.48	0.76	3.40	2.60	5.00
PLC Focus Group	14	3.14	0.46	3.00	2.50	4.00
PLCs Whole Staff	14	3.36	1.34	3.50	1.00	5.00

Table 43: Region 2 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	8	3.53	0.16	3.50	3.25	3.75
Inquiry in Student	8	3.25	0.53	3.50	2.50	4.00
Inquiry in Teacher	8	3.38	0.74	3.50	2.00	4.00
Intensity	8	3.29	0.32	3.26	2.88	3.88
Leadership	8	3.25	0.80	3.25	2.00	4.50
Māori and Pasifika student focus	8	3.08	0.48	3.16	2.30	3.60
PLC Focus Group	8	3.13	0.79	3.25	2.00	4.00
PLCs Whole Staff	8	3.13	1.25	3.00	2.00	5.00

Table 44: Region 3 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	4	3.88	0.32	3.88	3.50	4.25
Inquiry in Student	4	3.38	0.25	3.50	3.00	3.50
Inquiry in Teacher	4	4.25	.500	4.00	4	5
Intensity	4	3.38	0.23	3.38	3.13	3.63
Leadership	4	4.13	0.48	4.25	3.50	4.50
Māori and Pasifika student focus	4	3.25	0.24	3.25	3.00	3.50
PLC Focus Group	4	3.63	0.48	3.75	3.00	4.00
PLCs Whole Staff	4	1.75	0.50	2.00	1.00	2.00

Table 45: Region 4 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	5	3.95	0.41	3.75	3.50	4.50
Inquiry in Student	5	3.10	0.42	3.00	2.50	3.50
Inquiry in Teacher	5	3.80	0.84	4.00	3.00	5.00
Intensity	5	3.53	0.36	3.57	3.00	3.88
Leadership	5	3.00	0.79	3.00	2.00	4.00
Māori and Pasifika student focus	5	2.88	0.75	3.00	1.70	3.80
PLC Focus Group	4	2.63	0.48	2.75	2.00	3.00
PLCs Whole Staff	5	4.00	0.71	4.00	3.00	5.00

Table 46: Region 5 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	8	3.41	0.13	3.50	3.25	3.50
Inquiry in Student	8	3.75	0.46	3.75	3.00	4.50
Inquiry in Teacher	8	4.25	0.46	4.00	4.00	5.00
Intensity	8	3.23	0.24	3.25	2.75	3.63
Leadership	8	3.13	0.35	3.00	2.50	3.50
Māori and Pasifika student focus	8	3.38	0.93	2.95	2.40	4.60
PLC Focus Group	8	3.06	0.50	3.00	2.50	4.00
PLCs Whole Staff	6	2.50	0.55	2.50	2.00	3.00

Table 47: Region 6 Summary Statistics by Themes

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	4	4.06	0.38	4.25	3.50	4.25
Inquiry in Student	4	3.63	0.75	3.50	3.00	4.50
Inquiry in Teacher	4	4.50	0.58	4.50	4.00	5.00
Intensity	4	3.69	0.41	3.75	3.13	4.13
Leadership	4	3.50	0.41	3.50	3.00	4.00
Māori and Pasifika student focus	4	3.13	0.68	3.15	2.40	3.80
PLC Focus Group	4	3.63	0.63	3.50	3.00	4.50
PLCs Whole Staff	4	2.75	0.50	3.00	2.00	3.00

Appendix G: Questions in the 2010 Literacy Leader Questionnaire

Table 48: Themes and Questions for the Literacy Leader Questionnaire

Theme	Questions from the Questionnaire
Facilitator Schooling Support Service	Q32–36
Leadership	Q7, Q8, Q11, Q26–31, Q54
PLC Focus Group	Q9, Q10
PLCs Whole Staff	Q12, Q13
PLCs Department	Q18–Q25
Inquiry in Teacher	Q14–17, Q40, Q50
Inquiry in Student	Q37, Q45–47
Māori and Pasifika student focus	Q38, Q39, Q41–44, Q48, Q49
Intensity	Q9, Q10, Q12–36, Q48, Q49

Table 49: The Literacy Leader Questionnaire Questions

1	Which year did your school start SLP?
2	Have you been the Literacy Leader for the whole time SLP has run in your school?
3	How many Focus Group teachers have been involved in SLP PD this year?
4	How many teachers in total have participated in SLP Focus Groups since SLP started in your school?
5	How many of these teachers will still be teaching in your school in 2011?
6	Which ONE statement best describes how Focus Group teachers are grouped in your school?
7	How many members of your Senior Management Team (SMT) regularly attend Focus Group meetings?
8	How many of the Focus Group teachers hold formal middle-management roles in your school? (eg, Deans, HoDs, Assistant HoD of a large department)
9	How often has each Focus Group of teachers met for SLP Professional Development (PD) this year?
10	How long have PD sessions with Focus Group teachers usually lasted?
11	Do Focus Group teachers get teacher cover/relief for attending Focus Group meetings (actual or in lieu)?
12	How often per term has the whole-staff met for literacy PD as part of SLP?
13	How long have the literacy PD sessions with the whole staff teachers usually lasted?
14	How many classroom observations have you conducted with Focus Group teachers in total this year?
15	On average, how many classroom observations have you conducted with EACH individual Focus Group teacher this year?
16	How many feedback sessions about classroom observations have you conducted with Focus Group teachers in total this year?
17	On average, how many feedback sessions about classroom observations have you conducted with EACH individual Focus Group teacher this year?
18	How many literacy PD sessions have you led with the English department this year? (eg, at a department meeting)
19	How many literacy PD sessions have you led with the mathematics department this year? (eg, at a department meeting)
20	How many literacy PD sessions have you led with the science department this year? (eg, at a department meeting)
21	How many literacy PD sessions have you led with the social science department this year? (eg, at a department meeting)
22	How many literacy PD sessions have one or more Focus Group teachers led with the English department this year? (eg, at a department meeting)
23	How many literacy PD sessions have one or more Focus Group teachers led with the mathematics department this year? (eg, at a department meeting)
24	How many literacy PD sessions have one or more Focus Group teachers led with the science department this year? (eg, at a department meeting)
25	How many literacy PD sessions have one or more Focus Group teachers led with the social science department this year? (eg, at a department meeting)
26	How many meetings have you had with the Principal this year to discuss SLP?
27	How many meetings have you had with one or more members of the SMT to discuss SLP?
28	How many meetings have you had individually with the Head of English to discuss SLP?
29	How many meetings have you had individually with the Head of Mathematics to discuss SLP?
30	How many meetings have you had individually with the Head of Science to discuss SLP?
31	How many meetings have you had individually with the Head of Social Sciences to discuss SLP?
32	How many Regional meetings (led by your local Schooling Support Service) have you attended this year?
33	About how long did each regional meeting last?
34	How often has your Schooling Support Services SLP facilitator worked in your school this year?
35	On average, how much time does your Schooling Support Services facilitator spend in your school per visit?

36	How regularly do you have contact with your Schooling Support Services SLP facilitator? (eg, by email, phone, in person)
37	How precisely do you understand patterns of student literacy achievement and progress in your school?
38	How precisely do you understand patterns in the achievement and progress of your Māori students in particular?
39	How precisely do you understand patterns in the achievement and progress of your Pasifika students in particular?
40	How precisely do you understand how literacy teaching in your school impacts on your students' achievement?
41	How precisely do you understand how literacy teaching in your school impacts on the achievement of your Māori students in particular?
42	How precisely do you understand how literacy teaching in your school impacts on the achievement of your Pasifika students in particular?
43	How precisely do you understand why different Focus Group teachers have been more and less effective in raising achievement of your Māori students?
44	How precisely do you understand why different Focus Group teachers have been more and less effective in raising achievement of your Pasifika students?
45	In how many Focus Group sessions has e-asTTle reading data been a major focus?
46	In how many Focus Group sessions have samples/examples of student work been shared and analysed?
47	In how many Focus Group sessions has evidence of student voice been shared and analysed? (eg, from student surveys, interviews etc)
48	How many Focus Group sessions have had a major focus on student data/evidence about your Māori students in particular?
49	How many Focus Group sessions have had a major focus on student data/evidence about your Pasifika students in particular?
50	In how many Focus Group sessions has evidence about classroom teaching in your school been a major focus? (eg, data from observations and surveys you completed)
51	In how many Focus Group sessions has the "SLP Guidelines for Effective Adolescent Literacy Instruction" (GEALI) been a major focus?
52	In how many Focus Group sessions has the "Effective Literacy Strategies in Years 9-13" been a major focus?
53	List other major professional development interventions your schools is involved in this year (eg, Te Kotahitanga, implementing NZC, assessment)
54	How well has SLP been integrated with other interventions in your schools?

Appendix H: Literacy Leader Questionnaire Analysis by Region and Question in 2010

Regional Results

Table 50 to Table 55 summarise the statistics of the themes for each region.

Table 50: Region 1 Summary Statistics by Theme

Theme	N	M	SD	Mdn	Min	Max
Facilitator Schooling Support Service	9	4.00	0.30	4.00	3.40	4.40
Leadership	9	2.38	0.49	2.40	1.75	3.22
PLC Focus Group	9	2.61	0.22	2.50	2.50	3.00
PLCs Whole Staff	9	2.50	0.71	2.50	1.50	3.50
PLCs Department	9	1.32	0.35	1.38	1.00	2.00
Inquiry in Teacher	9	2.81	0.57	2.67	1.83	3.67
Inquiry in Student	9	3.28	0.54	3.25	2.25	4.25
Māori and Pasifika student focus	9	3.76	0.49	3.80	3.00	4.38
Intensity	9	2.37	0.21	2.38	2.04	2.62

Table 51: Region 2 Summary Statistics by Theme

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	4	3.39	0.55	3.45	2.67	4.00
Leadership	4	2.81	0.53	2.75	2.25	3.50
PLC Focus Group	4	3.25	0.29	3.25	3.00	3.50
PLCs Whole Staff	4	2.88	0.48	2.75	2.50	3.50
PLCs Department	4	2.41	0.34	2.44	2.00	2.75
Inquiry in Teacher	4	2.63	0.71	2.33	2.17	3.67
Inquiry in Student	4	3.06	0.52	3.00	2.50	3.75
Māori and Pasifika student focus	4	3.02	0.69	2.79	2.50	4.00
Intensity	4	2.79	0.32	2.69	2.54	3.22

Table 52: Region 3 Summary Statistics by Theme

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	3	3.87	0.42	4.00	3.40	4.20
Leadership	3	3.13	0.31	3.20	2.80	3.40
PLC Focus Group	3	3.00	0.00	3.00	3.00	3.00
PLCs Whole Staff	3	2.50	0.87	3.00	1.50	3.00
PLCs Department	2	2.19	0.09	2.19	2.13	2.25
Inquiry in Teacher	3	3.17	1.15	2.50	2.50	4.50
Inquiry in Student	3	3.42	0.72	3.00	3.00	4.25
Māori and Pasifika student focus	3	4.00	0.66	3.75	3.50	4.75
Intensity	3	3.00	0.63	2.86	2.45	3.68

Table 53: Region 4 Summary Statistics by Theme

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	6	3.60	0.44	3.60	2.80	4.00
Leadership	6	2.65	0.65	2.61	1.90	3.60
PLC Focus Group	6	2.58	0.58	2.75	1.50	3.00
PLCs Whole Staff	6	2.17	0.52	2.00	1.50	3.00
PLCs Department	5	1.68	0.56	1.38	1.13	2.50
Inquiry in Teacher	6	2.92	0.42	2.92	2.50	3.50
Inquiry in Student	6	3.14	0.16	3.13	3.00	3.33
Māori and Pasifika student focus	6	3.03	0.47	3.16	2.25	3.63
Intensity	6	2.54	0.47	2.47	2.00	3.10

Table 54: Region 5 Summary Statistics by Theme

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	4	4.05	0.19	4.10	3.80	4.20
Leadership	4	2.62	0.20	2.60	2.40	2.89
PLC Focus Group	4	2.88	0.25	3.00	2.50	3.00
PLCs Whole Staff	4	2.25	0.87	2.50	1.00	3.00
PLCs Department	4	1.34	0.26	1.38	1.00	1.63
Inquiry in Teacher	4	2.75	0.69	2.83	1.83	3.50
Inquiry in Student	4	2.56	0.63	2.63	1.75	3.25
Māori and Pasifika student focus	4	3.28	1.20	3.23	1.88	4.80
Intensity	4	2.44	0.24	2.47	2.14	2.68

Table 55: Region 6 Summary Statistics by Theme

Theme	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
Facilitator Schooling Support Service	5	3.84	0.30	3.80	3.40	4.20
Leadership	5	2.52	0.40	2.60	2.00	2.90
PLC Focus Group	5	2.30	0.27	2.50	2.00	2.50
PLCs Whole Staff	5	2.20	0.45	2.50	1.50	2.50
PLCs Department	5	1.47	0.31	1.50	1.00	1.86
Inquiry in Teacher	5	2.91	0.53	2.67	2.33	3.67
Inquiry in Student	5	3.23	0.34	3.25	2.67	3.50
Māori and Pasifika student focus	5	3.56	0.54	3.40	3.00	4.25
Intensity	5	2.39	0.26	2.42	1.96	2.66

Overall Results: Individual Questions

Summary statistics for each individual question that was on a scale of 1–5 are presented in Table 56.

Table 56: Overall Summary Statistics for Individual Questions

Question	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
7	31	1.87	0.88	2	1	4
8	31	2.71	0.82	3	1	4
9	29	2.69	1.00	2	1	5
10	31	2.71	0.74	3	1	4
11	30	3.47	1.41	3.5	1	5
12	30	1.97	0.89	2	1	4
13	31	2.84	0.78	3	1	5
14	30	2.37	1.10	2	1	5
15	27	2.67	0.68	3	2	4
16	31	2.19	1.11	2	1	5
17	29	2.59	0.68	3	1	4
18	29	2.14	1.30	2	1	5
19	27	1.33	0.48	1	1	2
20	29	1.38	0.73	1	1	4
21	29	1.48	0.69	1	1	3
22	28	1.46	0.84	1	1	4
23	27	1.81	1.18	1	1	5
24	27	1.78	1.12	1	1	4
25	27	1.70	1.10	1	1	4
26	30	3.23	1.30	3	1	5
27	30	3.33	1.52	3	1	5
28	26	2.62	1.60	2	1	5
29	30	1.77	0.90	2	1	5
30	30	1.70	0.79	2	1	4
31	30	2.07	1.17	2	1	5
32	28	3.29	0.76	3	2	4
33	31	4.74	0.44	5	4	5
34	31	3.48	1.03	3	2	5
35	30	3.50	1.01	3	2	5
36	28	4.11	0.79	4	3	5
37	29	3.97	0.73	4	3	5
38	30	3.67	0.80	4	2	5
39	24	3.71	0.95	4	2	5
40	29	4.10	0.77	4	2	5
41	30	4.00	0.83	4	2	5
42	23	3.91	0.90	4	2	5
43	30	3.40	1.10	4	1	5
44	25	3.32	1.14	4	1	5
45	30	3.27	0.78	3	2	5
46	31	2.87	0.81	3	1	4
47	31	2.52	0.89	3	1	4
48	29	2.93	0.96	3	1	5

Question	*N*	*M*	*SD*	*Mdn*	*Min*	*Max*
49	24	2.58	1.02	3	1	4
50	31	3.06	0.81	3	1	4
51	30	3.70	0.84	4	2	5
52	30	3.43	0.82	3	2	5
54	26	3.58	1.03	3	1	5

The remaining questions were on different scales.

Question 1 asked when the LL's school began participating in SLP. Nine of the 31 schools began in 2009, and the remaining 22 began in 2010. Question 2 asked whether the LL had been in their position since their school began participating in SLP, to which 30 of the 31 LLs responded yes.

Question 3 asked how many Focus Group teachers were involved in SLP that year (2010). The mean and median response was around 12. Question 4 asked how many teachers had participated in SLP Focus Groups since SLP began in their school, and Question 5 asked how many of these will still be teaching in their school in 2011. A median of 15 teachers had participated (M = 17.15) and a median of 14 teachers would still be teaching in 2011 (M = 15.50).

Question 6 asked for the one statement that best described how Focus Group teachers are grouped in the LL's school. The four options and number of responses are summarised below.

Option	Number of Responses
Teachers do not necessarily have a class or department in common	8
Different subject teachers are grouped around classes or students	17
Teachers meet in department groupings	1
Other	5

Question 53 asked which other major professional development interventions the school had been involved with in 2010. A total of 28 of the 31 LLs responded to this question, and most listed several other interventions. Common responses included implementing New Zealand Curriculum, introduction of National Standards, Te Kotahitanga and ICT.

Appendix I: Focus Class Analyses Collated

National Demographics by Cohort

Table 57 summarises the numbers and percentages of students by student year level, gender and ethnicity for the Focus and non-Focus classes and the two cohorts. Note that class information was not received for 1,886 pre-post students from seven schools.

Table 57: Demographic Summary of Pre-Post Students by Cohort and Focus Class Groupings

	Focus Class		non-Focus Class		All Pre-post Students*	
	n	**%**	***n***	**%**	***N***	**%**
Cohort 1						
Year Level						
Year 9	500	58.14	1192	49.52	2325	51.22
Year 10	360	41.86	1215	50.48	2214	48.78
Total	860	100.00	2407	100.00	4539	100.00
Gender						
Male	465	54.07	1395	57.96	2620	57.72
Female	395	45.93	1012	42.04	1919	42.28
Total	860	100.00	2407	100.00	4539	100.00
Ethnicity						
NZE	340	39.53	1288	53.51	2025	44.61
Māori	328	38.14	502	20.86	1179	25.97
Pasifika	135	15.70	346	14.37	659	14.52
Other	57	6.63	271	11.26	675	14.87
Unspecified	-	-	-	-	1	0.02
Total	860	100.00	2407	100.00	4539	100.00
Cohort 2						
Year Level						
Year 9	667	57.50	2207	47.72	3207	50.12
Year 10	493	42.50	2418	52.28	3192	49.88
Total	1160	100.00	4625	100.00	6399	100.00
Gender						
Male	687	59.22	2697	58.31	3690	57.67
Female	473	40.78	1928	41.69	2709	42.33
Total	1160	100.00	4625	100.00	6399	100.00
Ethnicity						
NZE	587	50.60	2152	46.53	3009	47.02
Māori	266	22.93	803	17.36	1142	17.85
Pasifika	156	13.45	864	18.68	1232	19.25
Other	151	13.02	804	17.38	1014	15.85
Unspecified	-	-	2	0.04	2	0.03
Total	1160	100.00	4625	100.00	6399	100.00

Total						
Year Level						
Year 9	1167	57.77	3399	48.34	5532	50.58
Year 10	853	42.23	3633	51.66	5406	49.42
Total	2020	100.00	7032	100.00	10938	100.00
Gender						
Male	1152	57.03	4092	58.19	6310	57.69
Female	868	42.97	2940	41.81	4628	42.31
Total	2020	100.00	7032	100.00	10938	100.00
Ethnicity						
NZE	927	45.89	3440	48.92	5034	46.02
Māori	594	29.41	1305	18.56	2321	21.22
Pasifika	291	14.41	1210	17.21	1891	17.29
Other	208	10.30	1075	15.29	1689	15.44
Unspecified	-	-	2	0.03	3	0.03
Total	2020	100.00	7032	100.00	10938	100.00

* Includes 1,886 students that had no Focus Class information.

Summary Statistics by Cohort

Summary statistics for students in Focus and non-Focus Classes split by cohort are presented in Table 58. Focus Class students in both Years 9 and 10 had lower achievement levels in both Term 1 and Term 4 but made greater score gains than their non-Focus Class peers. Focus Class students of Cohort 1 made greater shift in curriculum level than non-Focus Class students. The same was true for Year 9 of Cohort 2, but not for Year 10 of Cohort 2.

Table 58: Summary Statistics of Focus and Non-Focus Class Achievement by Cohort in 2010

Cohort / Year Level	Class	*N*	Term 1			Term 4			Score Difference	Shift in Sublevel
			M	*SD*	*Mdn Level*	*M*	*SD*	*Mdn Level*		
Cohort 1										
Year 9	Focus	499	1447	96.10	3A	1477	86.15	4P	29	2
	Non-Focus	1189	1476	94.53	4P	1491	82.48	4P	15	0
	Total	1688	1468	95.88	4B	1487	83.81	4P	19	1
Year 10	Focus	357	1490	106.00	4P	1518	89.39	4A	27	1
	Non-Focus	1215	1522	93.97	4A	1525	79.79	4A	3	0
	Total	1572	1515	97.70	4A	1523	82.09	4A	8	0
Cohort 2										
Year 9	Focus	665	1482	95.35	4P	1509	84.88	4A	27	1
	Non-Focus	2202	1491	86.96	4P–4A	1517	82.51	4A	26	0.5
	Total	2867	1489	89.05	4P	1515	83.12	4A	26	1
Year 10	Focus	493	1519	78.71	4A	1527	67.68	4A	8	0
	Non-Focus	2417	1531	89.21	4A	1536	78.31	4A	6	0
	Total	2910	1529	87.61	4A	1535	76.69	4A	6	0

School Focus Class Organisation

Of the 60 schools, in 20 schools all students were taught by three or more Focus Group teachers (ie, all students were in Focus Classes). In 11 schools, no classes were taught by three or more Focus Group teachers (ie, all students were in non-Focus Classes). In 22 schools, some students were in Focus Classes and some were in non-Focus Classes (ie, mixed). The organisation of classes and teachers was unknown for the remaining 7 schools.

A one-way ANOVA (Table 59) was conducted to compare students in each of the three types of school: all Focus Class schools, mixed schools and all non-Focus Class schools. This analysis showed that there were significant differences between school types in all measures: Term 1 and Term 4 overall e-asTTle scores and raw score gains for both Year 9 and Year 10.

Table 59: One-way ANOVA on School Differences by Year Level

Year Level	Score	*df*	*F*	*p*
Year 9				
	Term 1 Overall Score	2, 1047.66	5.20	<.01
	Term 4 Overall Score	2, 4565	7.88	<.001
	Raw Score Gain Term 1–4	2, 1062.01	20.31	<.001
Year 10				
	Term 1 Overall Score	2, 1184.78	21.16	<.001
	Term 4 Overall Score	2, 1194.93	30.61	<.001
	Raw Score Gain Term 1–4	2, 4485	22.79	<.001

Table 60 shows the achievement level differences between the groups at Term 1 and Term 4. Regardless of year level, the general pattern was that students in all Focus Class schools had the lowest mean achievement score, followed by students in mixed schools and then students in schools with non-Focus Classes in Term 1. However, by Term 4, schools with mixed types of classes had the lowest mean achievement score followed by students in all Focus Class schools and then students in schools with all students in non-Focus Classes. The raw score gains made by students in schools where all students were in Focus Classes were significantly larger than those of the other two types of schools. These patterns of achievement changes are shown by Figure 9 and Figure 10 for Years 9 and 10 students respectively.

Table 60: Summary Statistics for Students from Different Types of School Focus Class

School Organisation	*N*	Term 1			Term 4			Gain	
		M	*SD*	*Mdn Level*	*M*	*SD*	*Mdn Level*	*M*	*SD*
Year 9									
All in Focus Class	406	1468	102.07	4B	1504	87.03	4A	36.10	53.27
Mixed	2840	1481	91.54	4P	1501	84.71	4A	20.36	50.33
All in non-Focus Class	1320	1486	90.03	4P	1513	82.74	4A	26.94	47.58
Total	4566	1481	92.19	4P	1505	84.48	4A	23.66	50.05
Year 10									
All in Focus Class	457	1510	97.88	4A	1530	81.42	4A	20.82	49.92
Mixed	2761	1520	92.52	4A	1524	79.73	4A	4.17	48.87
All in non-Focus Class	1268	1537	85.34	4A	1544	74.01	4A	7.81	49.63
Total	4486	1524	91.52	4A	1531	78.82	4A	6.89	49.43

Note that not all 60 schools had pre-post achievement data in 2010 for analysis; four schools had no pre-post

data. Two of these schools had all students in Focus Classes, while the other two schools had all students in non-Focus Classes.

Figure 9: Mean overall scores for students from different types of schools: Year 9

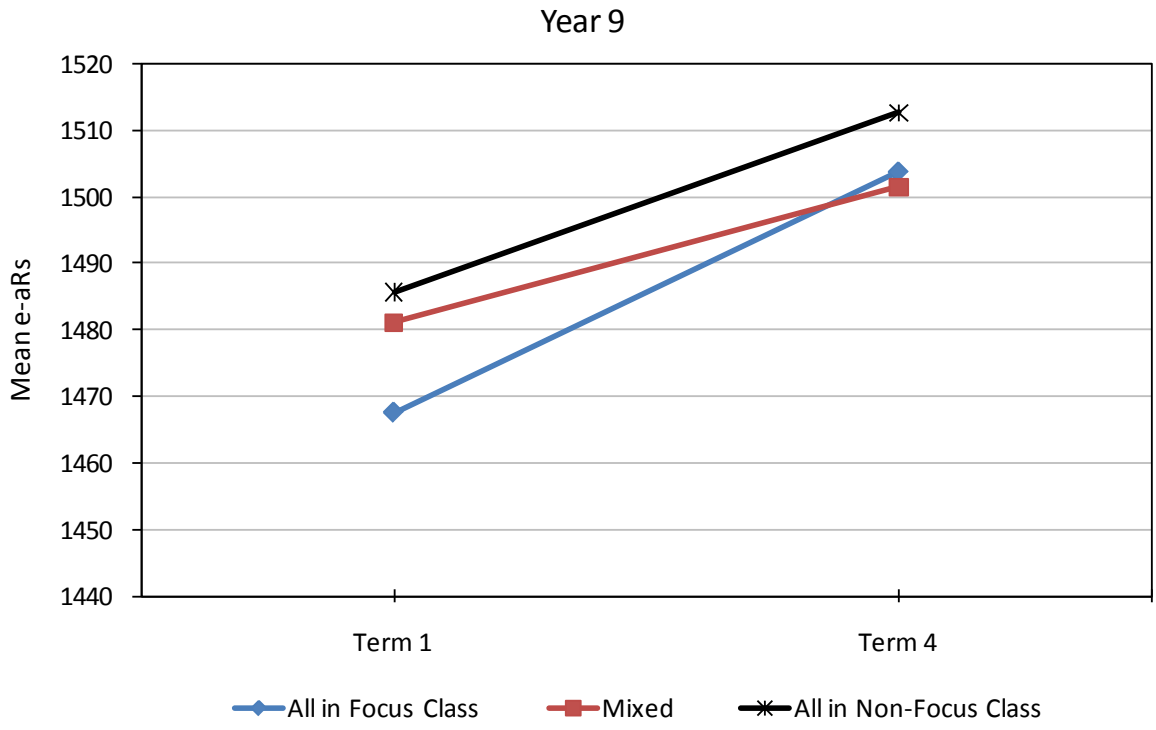
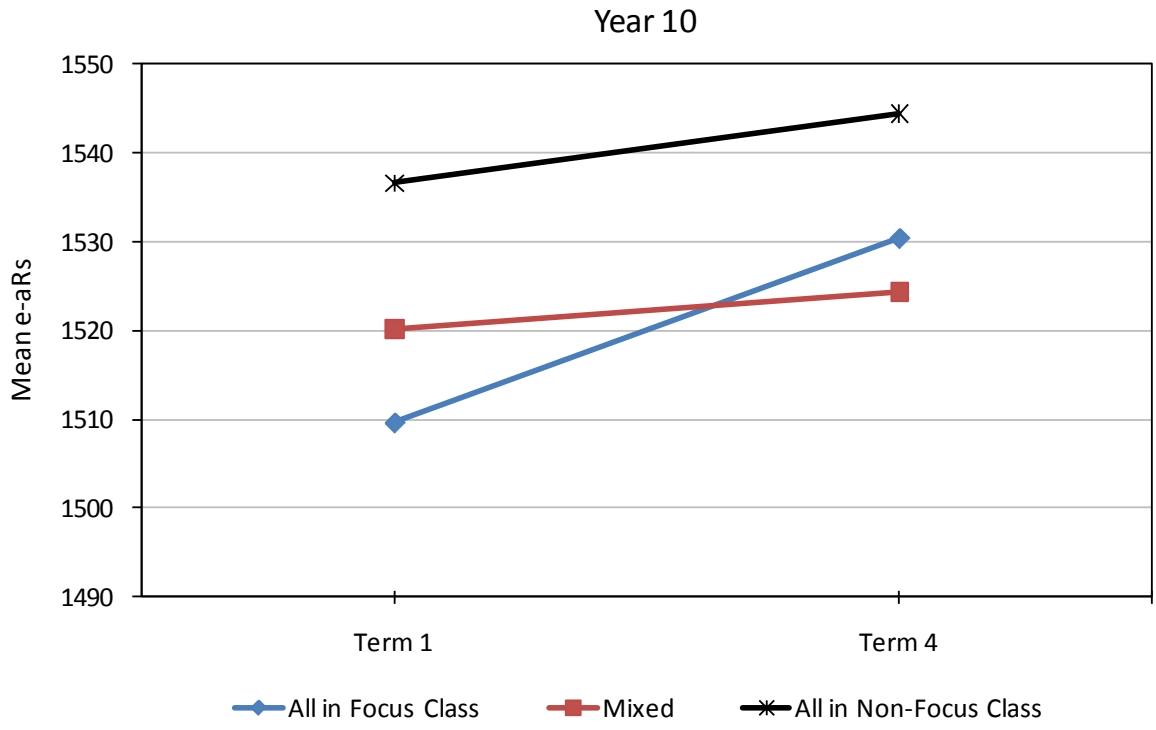


Figure 10*:* Mean overall scores for students from different types of schools: Year 10



Focus Classes

Summary statistics for students in Focus and non-Focus Classes are presented in Table 61. Focus Class students in both Years 9 and 10 had lower achievement levels in both tests but made significantly larger score gains than their non-Focus Class peers. Table 62 contains the *t* test results comparing the Focus Class with non-Focus Class students in overall, surface and deep scores and gains. Students who were in Focus Classes made significantly greater gains in overall score and also in the surface and deep features with moderate effect sizes. However, the mean differences between the two types of classes were not greater than 22 scores, which does not assume significant difference as according to the e-asTTle norm description.

Table 61: Summary Statistics of Focus and non-Focus Class Achievement in 2010

Year Level	Class	*N*	Term 1			Term 4			Score Difference	Shift in Sublevel
			M	*SD*	*Mdn Level*	*M*	*SD*	*Mdn Level*		
9	Focus	1167	1467	97.15	4P	1495	86.88	4P	28	0
	Non-Focus	3399	1486	89.94	4P	1508	83.40	4A	22	1
	Total	4566	1481	92.19	4P	1505	84.48	4A	24	1
10	Focus	853	1507	92.26	4A	1523	77.69	4A	16	0
	Non-Focus	3633	1528	90.90	4A	1532	78.98	4A	5	0
	Total	4486	1524	91.52	4A	1531	78.82	4A	7	0

Table 62: Focus and non-Focus Classes Compared in Overall, Surface and Deep Scores

	Focus Class			non-Focus Class			*t*	*df*	*p*	*d*
	n	*M*	*SD*	*n*	*M*	*SD*				
Year 9										
Overall Score										
Term 1	1167	1467.21	97.15	3399	1486.05	89.94	-5.82	1897	<0.001	-0.21
Term 4	1167	1495.33	86.88	3399	1508.18	83.40	-4.40	1953	<0.001	-0.15
Gain	1167	28.12	53.77	3399	22.13	48.62	3.36	1862	0.001	0.12
Surface Score										
Term 1	1130	1480.80	112.59	3335	1515.01	115.53	-8.66	4463	<0.001	-0.30
Term 4	1025	1499.51	94.55	3155	1504.32	91.17	-1.45	4178	0.15	-0.05
Gain	999	20.65	75.13	3100	-7.31	81.17	10.03	1808	<0.001	0.35
Deep Score										
Term 1	1088	1497.58	111.36	3285	1528.83	116.97	-7.73	4371	<0.001	-0.27
Term 4	1104	1502.65	83.89	3307	1508.05	79.35	-1.88	1807	0.06	-0.07
Gain	1034	9.65	82.88	3213	-18.91	94.39	9.31	1965	<0.001	0.31
Year 10										
Overall Score										
Term 1	853	1506.81	92.26	3633	1527.71	90.90	-6.02	4484	<0.001	-0.23
Term 4	853	1522.81	77.69	3633	1532.46	78.98	-3.22	4484	<0.01	-0.12
Gain	853	16.00	48.48	3633	4.75	49.41	6.00	4484	<0.001	0.23

Surface Score										
Term 1	830	1522.86	109.89	3530	1560.74	120.34	-8.77	1337	<0.001	-0.32
Term 4	724	1526.03	91.57	3209	1540.88	90.29	-3.99	3931	<0.001	-0.16
Gain	706	7.36	78.76	3135	-19.51	86.26	7.59	3839	<0.001	0.32
Deep Score										
Term 1	806	1533.20	103.77	3493	1568.37	118.68	-8.43	1336	<0.001	-0.30
Term 4	810	1528.25	79.88	3523	1534.95	77.51	-2.21	4331	0.03	-0.09
Gain	772	-2.58	82.50	3407	-33.19	96.77	9.00	1298	<0.001	0.33

Progress of Māori and Pasifika Students in Different Types of Classes

Table 63 summarises the two sample *t* test results comparing the scores in Term 1 and Term 4 and raw score gains between Māori and Pasifika students in Focus Classes and non-Focus Classes. Regardless of year level, significant differences were found between the overall scores of Māori and Pasifika students in non-Focus Classes in both Term 1 and Term 4. In contrast, differences in overall scores for the students of Focus Classes were not significant. No significant differences were found between the two ethnic groups in the raw score gains.

Table 63: T Test Results for Māori Students Compared with Pasifika Students in Scores and Gains

	Māori			Pasifika			*t*	*df*	*p*	*d*
	n	*M*	*SD*	*n*	*M*	*SD*				
Year 9										
Focus Classes										
Term 1 score	351	1441.60	94.01	156	1431.84	83.54	1.12	505	0.26	0.11
Term 4 score	351	1473.24	83.89	156	1458.06	77.48	1.92	505	0.05	0.19
Term 1–Term 4 gain	351	31.64	53.65	156	26.22	49.69	1.07	505	0.28	0.10
non-Focus Classes										
Term 1 score	626	1462.98	84.18	575	1437.64	82.36	5.27	1199	<0.001	0.30
Term 4 score	626	1483.77	80.10	575	1462.51	77.95	4.66	1199	<0.001	0.27
Term 1–Term 4 gain	626	20.80	51.51	575	24.87	47.79	-1.42	1199	0.16	-0.08
Year 10										
Focus Classes										
Term 1 score	243	1475.21	93.92	135	1474.33	85.73	0.09	376	0.93	0.01
Term 4 score	243	1503.23	76.95	135	1492.70	79.39	1.26	376	0.21	0.14
Term 1–Term 4 gain	243	28.01	50.74	135	18.38	44.79	1.84	376	0.07	0.20
non-Focus Classes										
Term 1 score	679	1503.95	90.08	635	1476.98	84.74	5.58	1312	<0.001	0.31
Term 4 score	679	1511.71	77.01	635	1490.54	73.60	5.09	1312	<0.001	0.28
Term 1–Term 4 gain	679	7.76	55.31	635	13.56	51.18	-1.97	1312	0.05	-0.11

Ethnicity by Focus Class

Independent samples *t* tests were conducted to compare Focus Class and non-Focus Class students specifically for the Māori and Pasifika students' gains from Term 1 to Term 4 (Table 64). Māori students from Focus Classes significantly outperformed their peers from the non-Focus Classes. However, the same was not found with the Pasifika students. Overall, students from Focus Classes, including NZ European and other ethnicities, gained significantly higher than students from non-Focus Classes.

Though these differences were statistically significant, they were not educationally significant according to the e-asTTle website (ie, less than 22 e-aRs). The mean difference between Focus and non-Focus classes of the Year 10 Māori students was close to being educationally significant (M_{diff} = 20.14, *SE* = 3.88). This was also reflected in the effect sizes, where the effect size for Year 10 Māori students was 0.37.

Table 64: Independent Samples T Test Comparison in 2010 Achievement Gain between Focus Class and non-Focus Class for Māori and Pasifika Students by Year Level

	Focus			Non-Focus			*t*	*df*	*p*	*d*
	N	***M***	***SD***	***N***	***M***	***SD***				
Māori										
Year 9	357	31.31	53.46	650	20.13	51.75	3.24	1005	<.01	0.21
Year 10	243	28.01	50.74	681	7.88	55.28	4.98	922	<.001	0.37
Pasifika										
Year 9	161	26.29	49.98	588	24.14	47.71	0.50	747	0.62	0.05
Year 10	136	18.52	44.66	635	13.56	51.18	1.05	769	0.30	0.10
All Students										
Year 9	1204	27.82	53.48	3498	21.40	48.67	3.67	1933	<.001	0.13
Year 10	855	15.94	48.49	3637	4.76	49.41	5.98	4490	<.001	0.23

Table 65 summarises the results of comparing Focus Class and non-Focus Class students in Term 4 2010. For both Māori and Pasifika students, there were no significant differences between Focus and non-Focus classes in overall scores at the end of the year. However, the significant differences between the two types of classes remained for overall students.

Table 65: Independent Samples T Test Comparison in Term 4 2010 Achievement Score between Focus Class and non-Focus Class for Māori and Pasifika Students by Year Level

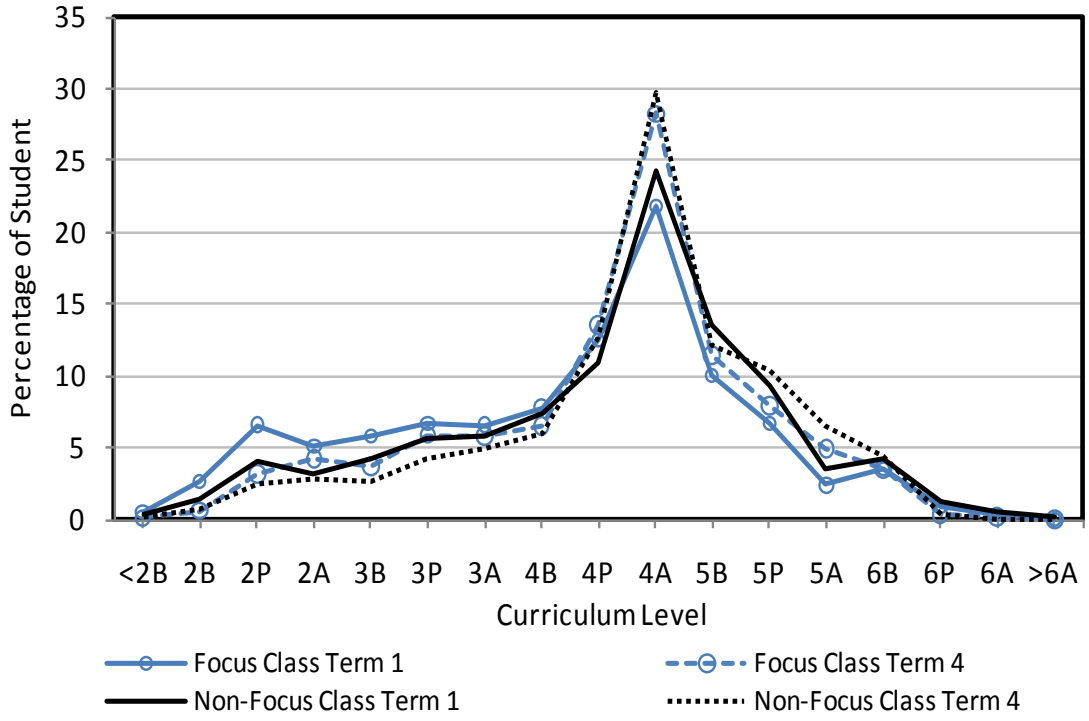
	Focus			Non-Focus			*t*	*df*	*p*	*d*
	N	*M*	*SD*	*N*	*M*	*SD*				
Māori										
Year 9	464	1472	82.37	963	1478	81.02	-1.15	1425	0.25	-0.07
Year 10	324	1500	77.52	1037	1504	77.17	-0.75	1359	0.45	-0.05
Pasifika										
Year 9	223	1456	77.30	675	1461	78.61	-0.77	896	0.44	-0.06
Year 10	194	1484	86.05	769	1481	79.46	0.51	961	0.61	0.04
All Students										
Year 9	1478	1493	85.52	4291	1503	85.21	-3.85	5767	<.001	-0.12
Year 10	1071	1517	80.30	4783	1527	81.34	-3.58	5852	<.011	-0.12

National Curriculum Level Distribution: Focus and Non-Focus Classes

Overall Distribution

Figure 11 shows the percentage of students, split by whether they were in a Focus Class in 2010, in each overall curriculum level in Term 1 and Term 4. Both Focus Class and non-Focus Class students had noticeable shifts toward higher curriculum levels, but Focus Class students made greater improvements in curriculum levels as their Term 4 distribution became closer to the Term 4 distribution of the non-Focus Class. Most students achieved between 4P and 5B for both tests.

Figure 11: Term 1–4, 2010 curriculum level distribution: Overall pre-post students of the Focus and non-Focus Classes



Distribution by Year Level

Figure 12 and Figure 13 extended the distributions presented in Figure 11 by separating students by their year level. For both year levels, the distributions shifted toward higher levels from Term 1 to Term 4 and most students were between levels 4P and 5B.

For Year 9, more non-Focus Class students were at the national norm expected level (4A) than Focus Class students in Term 4. However, more Focus Class students improved their achievement level. For Year 10 students, most students were at 4A in Term 4, which was one sub-level lower than the expected norm (5B). There were more Focus Class students achieving at 4A than non-Focus Class students at Term 4.

Figure 12: Term 1–4, 2010 curriculum level distribution: Year 9 pre-post students of the Focus and non-Focus Classes.

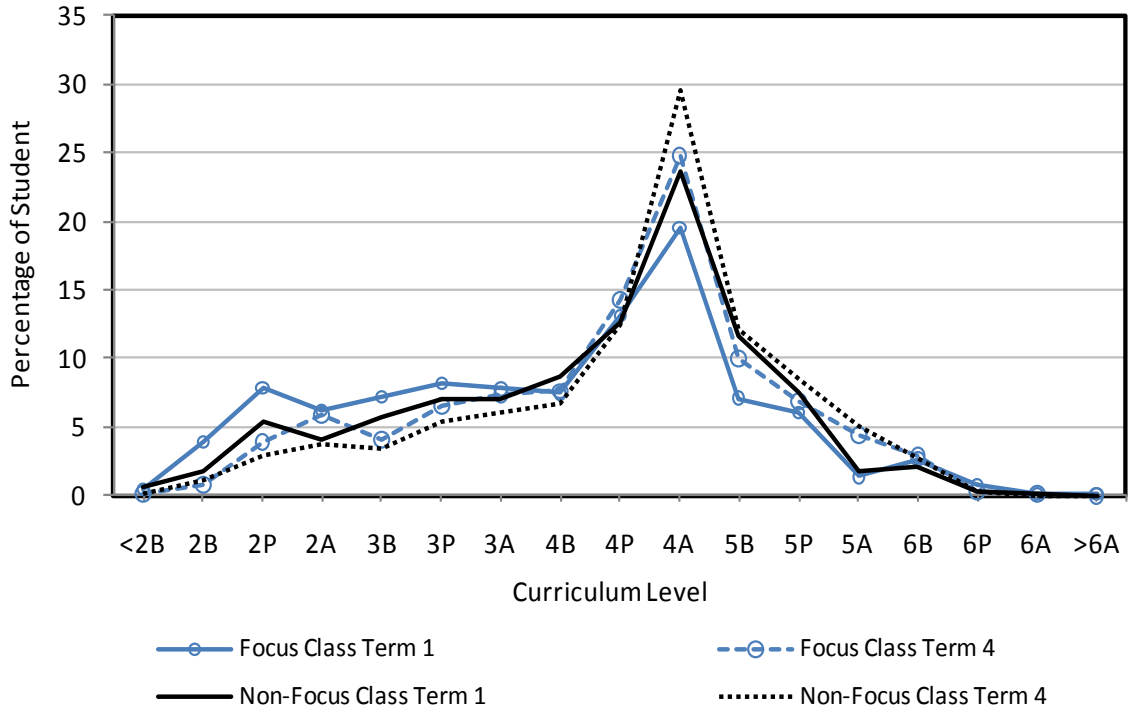
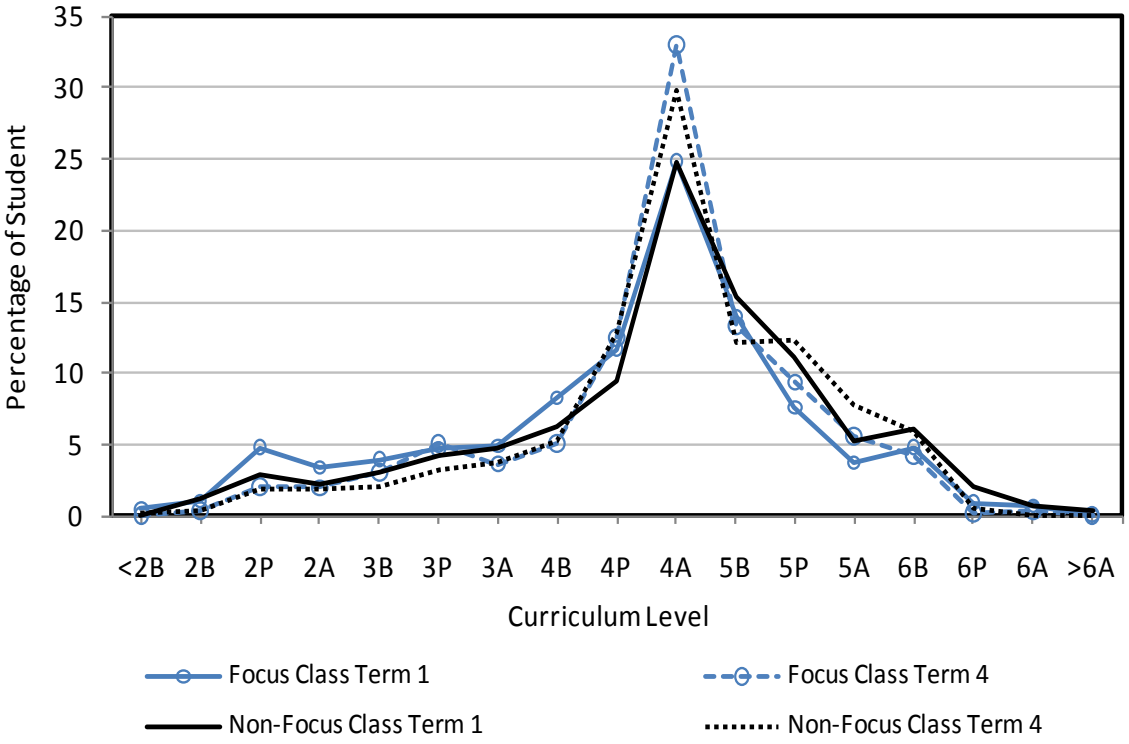


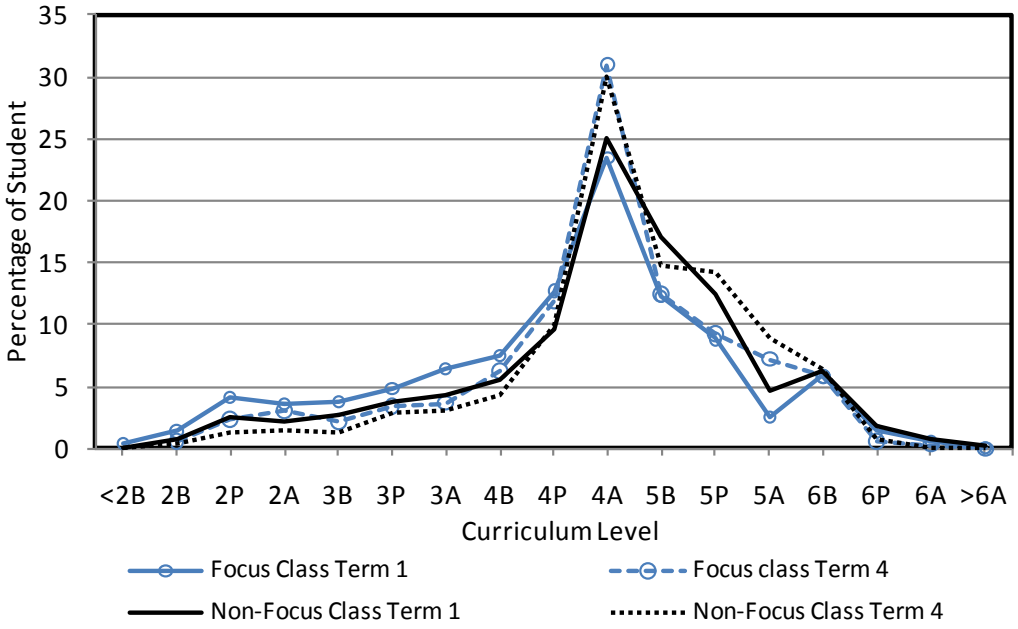
Figure 13: Term 1–4, 2010 curriculum level distribution: Year 10 pre-post students of the Focus and non-Focus Classes.



Distribution by Ethnicity

Figure 14, Figure 15 and Figure 16 extended the distributions presented in Figure 11 by separating students by their ethnicity. In both year levels, the distributions shifted toward higher levels from Term 1 to Term 4 and most students were between levels 4P and 5B.

Figure 14: Term 1–4, 2010 curriculum level distribution: New Zealand European pre-post students of the Focus and non-Focus Classes



For New Zealand European students (Figure 14), a similar proportion of Focus Class and non-Focus Class students were at the national norm expected level (4A) in Term 4.

For Māori students (Figure 15), there were more Focus Class students at the lower curriculum levels (eg, between <2B and 3A) than non-Focus Class students at Term 1. This gap was shortened by Term 4, and most students were at 4A in Term 4.

For Pasifika students, the patterns of achievement levels were more complicated for both types of classes. The majority of students were achieving at the lower end of the curriculum level spectrum. The most noticeable shift for Pasifika students of the Focus Classes was from 2P to 3P from Term 1 to Term 4, and the increase in numbers of students achieving at 4P and 5P in Term 4. Non-Focus Classes had a similar achievement distribution but had fewer students at the lower curriculum levels.

Figure 15: Term 1–4, 2010 curriculum level distribution: Māori pre-post students of the Focus and non-Focus Classes.

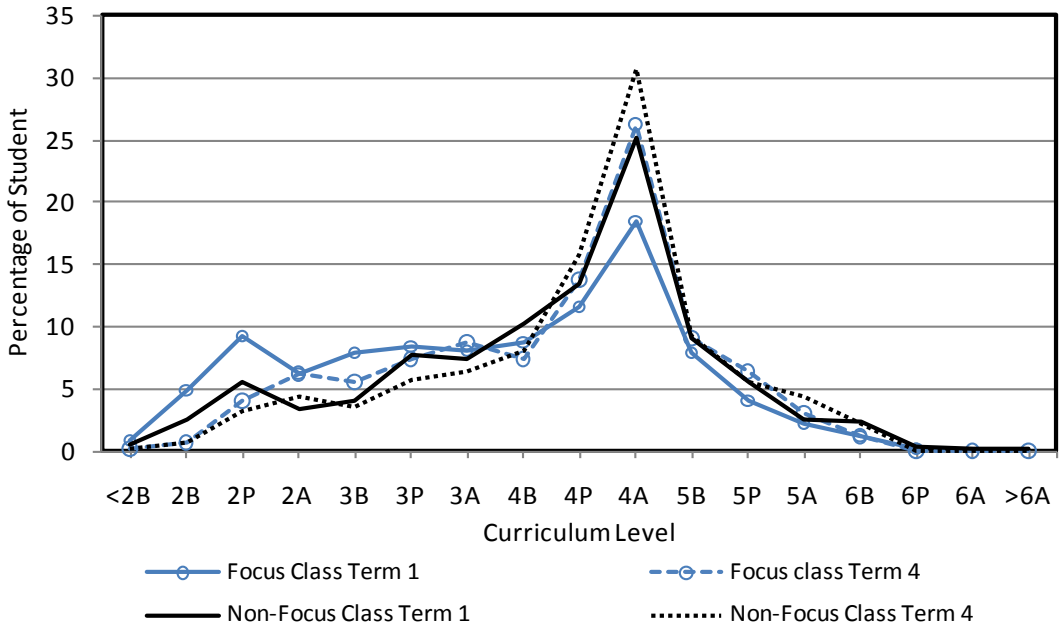


Figure 16: Term 1–4, 2010 curriculum level distribution: Pasifika pre-post students of the Focus and non-Focus Classes.

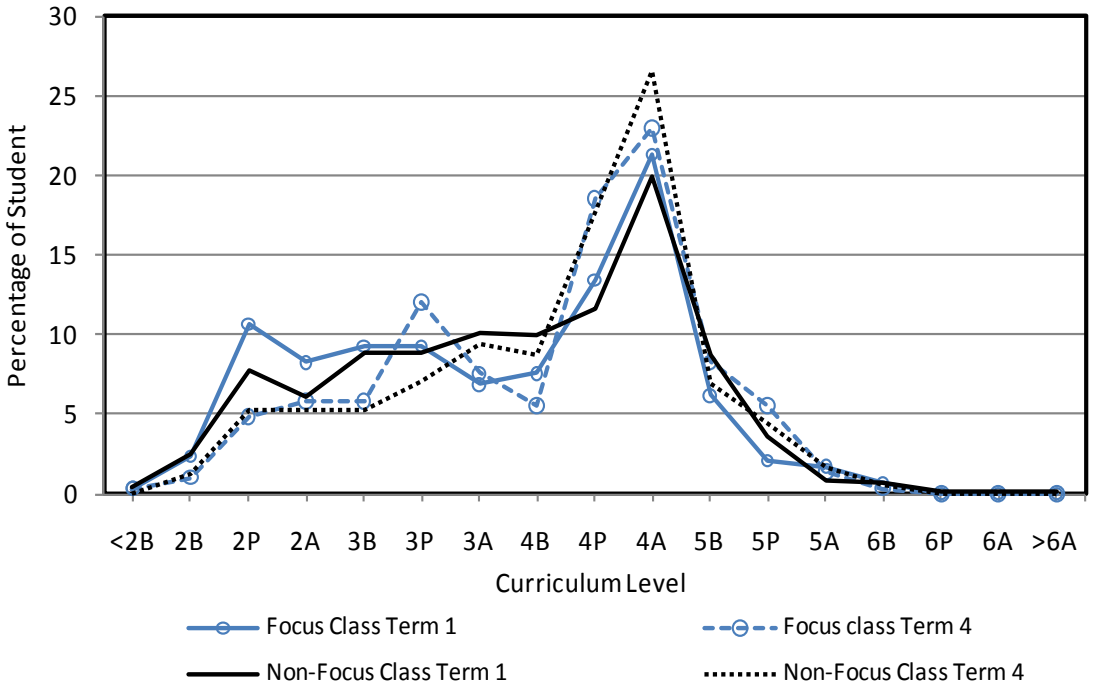


Table 66: Summary Shift Table of Māori Students and Overall Students by Year Level and Focus Class

				Term 1			Term 4			Gain				Shift in Level
			N	*M*	*SD*	*Mdn*	*M*	*SD*	*Mdn*	*M*	*SD*	*d*	d_{Norm}*	
Māori														
	Year 9													
		Focus Class	357	1442.72	93.72	3A	1474.03	83.48	4P	31.31	53.46	0.35	0.17	2
		non-Focus Class	650	1462.69	84.34	4B	1482.82	80.54	4P	20.13	51.75	0.24	-0.04	1
	Year 10													
		Focus Class	243	1475.21	93.92	4P	1503.23	76.95	4A	28.01	50.74	0.33	-0.20	1
		non-Focus Class	681	1503.91	89.95	4A	1511.79	76.91	4A	7.88	55.28	0.09	-0.54	0
Pasifika														
	Year 9													
		Focus Class	161	1433.35	82.71	3A	1459.65	77.86	4B	26.29	49.98	0.33	0.09	1
		non-Focus Class	588	1437.49	82.68	3A	1461.63	78.38	4B	24.14	47.71	0.30	0.04	1
	Year 10													
		Focus Class	136	1475.21	86.03	4P	1493.73	79.99	4A	18.52	44.66	0.22	-0.44	1
		non-Focus Class	635	1476.98	84.74	4P	1490.54	73.60	4P	13.56	51.18	0.17	-0.48	0
Overall														
	Year 9													
		Focus Class	1204	1468.15	95.94	4P	1495.97	85.94	4A	27.82	53.48	0.31	0.11	1
		non-Focus Class	3498	1486.27	90.62	4P	1507.67	84.02	4A	21.40	48.67	0.25	-0.01	1
	Year 10													
		Focus Class	855	1506.99	92.23	4A	1522.93	77.69	4A	15.94	48.49	0.19	-0.45	0
		non-Focus Class	3637	1527.69	90.86	4A	1532.45	78.95	4A	4.76	49.41	0.06	-0.67	0

* Effect size between mean gain and norm expected gain.

Table 67: Summary Shift Table of Year 9 Students by Cohort and Focus Class

	N	Term 1			Term 4			Gain			d_{Norm}*	Shift in Level
		M	*SD*	*Mdn*	*M*	*SD*	*Mdn*	*M*	*SD*	*d*		
Cohort 1												
Focus Class												
Unweighted	499	1447.25	96.10	3A	1476.75	86.15	4P	29.50	55.65	0.32	0.13	0
Weighted (by school N)	17	1455.11	68.84	3A–4B	1487.49	56.10	4P	32.38	27.49	0.52	0.38	1.5
non-Focus Class												
Unweighted	1189	1476.17	94.53	4P	1491.16	82.48	4P	14.99	50.90	0.17	-0.14	0
Weighted (by school N)	11	1478.97	43.65	4B–4P	1494.82	38.38	4P	15.84	14.71	0.39	-0.42	0.5
Cohort 2												
Focus Class												
Unweighted	665	1482.14	95.35	4P	1509.11	84.88	4A	26.97	52.35	0.30	0.09	0
Weighted (by school N)	20	1462.43	59.62	4B	1492.09	44.08	4P	29.66	26.61	0.57	0.29	1
non-Focus Class												
Unweighted	2202	1491.45	86.96	4P–4A	1517.41	82.51	4A	25.96	46.89	0.31	0.08	0
Weighted (by school N)	18	1460.70	75.31	4B–4P	1493.91	48.88	4P	33.21	33.70	0.52	0.33	0.5
Overall												
Focus Class												
Unweighted	1164	1467.18	97.18	4P	1495.24	86.88	4P	28.05	53.78	0.30	0.11	0
Weighted (by school N)	37	1459.07	63.21	4B	1489.98	49.29	4P	30.91	26.67	0.55	0.33	1
non-Focus Class												
Unweighted	3391	1486.09	89.97	4P	1508.21	83.43	4A	22.11	48.61	0.25	0.00	0
Weighted (by school N)	29	1467.63	64.85	4B–4P	1494.25	44.46	4P	26.62	28.99	0.48	0.16	0.5

* Effect size between mean gain and norm expected gain.

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