Evaluation Report

Teacher Professional Leave 2013

Prepared for Department of Education and Early Childhood Development

June 2014

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Contents

Executive summary

This evaluation of Teacher Professional Leave (TPL) in 2013 has shown that it was a **strongly transformative experience for many teachers and their students' learning**. It allowed teachers to undertake an intensive, school-based, teacher-led, professional learning inquiry. Teachers used multiple sources of evidence regarding their students' needs, and researched, planned, trialled, and reflected upon changes in their practice to address these needs. Teachers achieved demonstrable improvements in their knowledge, practice, and attitudes, which led to substantial student outcomes in the target areas of teachers' inquiries. This included improvements across students' discipline/content knowledge, capabilities and skills, and attitudes and beliefs.

This is the final report for the evaluation. It has been prepared for the Department of Education and Early Childhood Development (DEECD). It provides information based on data collected from twelve case studies and two surveys of the cohort, as well as application data, and meetings with DEECD's Quality Workforce Unit and the provider of the TPL Induction Day and Support Program; EdPartnerships.

This report includes an in-depth analysis of the evidence used by teachers to underpin their professional learning inquiry. It found that **teachers most used evidence to identify student needs, followed by using it to measure changes in student outcomes**. This was often related to providing more differentiated learning for the students. Teachers were assisted by their school having a focus on using data to inform teaching, and by the practical student profiling activity provided at the TPL Induction Day and Support Program. Three-quarters of case studies were using student-focused evidence collected in their classroom, designing and using multiple evidence sources, and/or collecting multiple rounds of evidence across the duration of their inquiry. One-quarter relied on broader school data sets such as NAPLAN or On Demand. Using evidence to identify professional learning needs or measuring changes in teacher practice was more limited.

The **improved collection and use of evidence to inform changes in teacher practice was a substantial learning for many teachers** undertaking TPL in 2013. Many teachers were planning to embed the changed practice into their ongoing planning and assessment, albeit more efficiently now that they had developed skills and materials. The largest obstacle to collecting and using evidence was having the time. The increased use of evidence as part of inquiries also meant that **the changes in practice being made were more evidence-based, and tied more closely to identified student needs**, rather than untested assumptions. In every case study, students were clear about the changes that the teacher had made in their practice, and were positive about the resulting improvements for their learning.

Teachers described in detail the changes they made to their practice, and the new knowledge and skills they had gained through their TPL inquiry. **Teachers achieved demonstrable improvements in their knowledge, practice, and attitudes. Improvements in practice and attitudes were particularly strong.**

- Practice improvements delivered stronger differentiated/personalised/individualised learning for students, more self-directed and inquiry-based learning, more collaborative teaching practices, as well as teachers being more explicit, facilitating higher order questioning and better quality discussions amongst students, and more collection and better use of evidence in the classroom
- Attitude improvements delivered stronger beliefs in the power of teaching and what can be achieved through professional learning, improved confidence in relation to content-specific areas such as literacy, numeracy and ICT, and improved confidence and motivation to continue trialling new teaching techniques and strategies based on student evidence, and to collaborate and share professional knowledge with other teachers

- Knowledge improvements delivered stronger content-specific understandings related to child development, particularly in literacy and numeracy for primary school teachers and those earlier in their careers.

These improvements for TPL teachers were confirmed by principals, students, and teacher colleagues. Teachers also dramatically improved their understanding of evidence-based inquiries, teacher-led professional learning and the importance of using evidence to inform changes in teacher practice. Across the duration of TPL **there was a 26-fold increase in the proportion of teachers feeling 'very confident' to undertake evidence-based inquiry into their practice**, from 2% to 52%. By the end of TPL nearly all respondents (98%) were confident or very confident to continue such inquiry into their teaching practice, and over four in five were 'very motivated' to:

- Trial new techniques and strategies in their classroom (98%, compared to 59% prior)
- Discuss and share professional knowledge with other staff (93% compared to 63% prior)
- Collect, analyse, and use student evidence to modify their teaching practice (85% compared to 35% prior)
- Analyse student learning evidence together with other staff (80% compared to 45% prior).

Almost all were also collaborating and sharing their developed learnings, resources or materials more broadly across their school or beyond their school by the end of their inquiry.

These improvements achieved by teachers led to substantial student outcomes in the target areas of teachers' inquiries. This included improvements across students' discipline/content knowledge, capabilities and skills, and attitudes and beliefs. In the case studies, improvements in student attitudes and beliefs were particularly strong, including improvements in engagement, confidence and motivation, along with improvements in their beliefs in themselves as learners, beliefs in their ability to achieve higher results, and seeing the learning as applicable to the 'real world'. These improved attitudes and beliefs generally flowed through to improved discipline/content knowledge and improved skills and capabilities. **Students were clear about the changes that teachers had made to their practice and described the positive impacts on their learning**. On quantitative measures comparing the results of the pre and post surveys, teacher-reported student outcomes advanced by an effect size of between 0.6 and 1.2,[1] including:

- Student awareness of the way they learn, 1.2
- Student capacity as independent learners, 1.1
- Student engagement, 0.9
- Student learning outcomes, 0.8
- Student behaviour, 0.6.

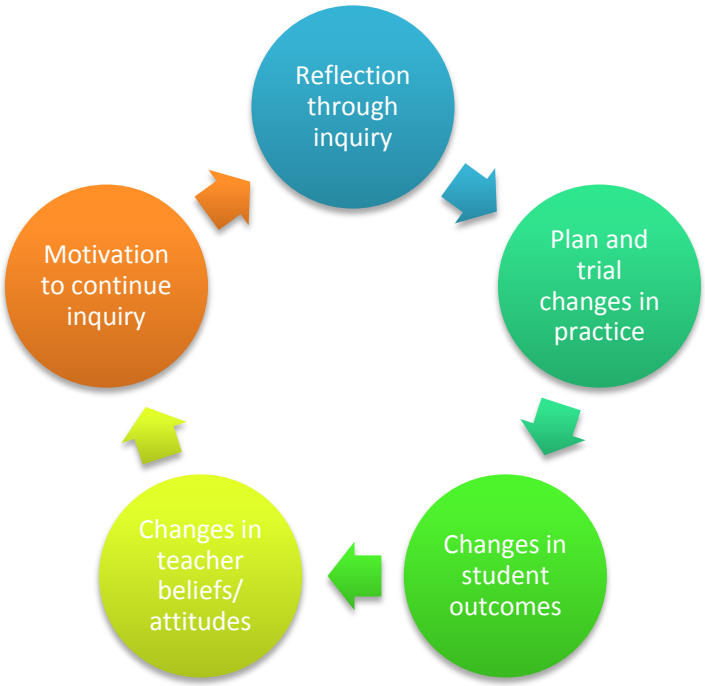
This report also discusses how **the structure of time release for teacher-led inquiry (i.e. TPL's structure) aligns with the practices of global high-performing systems**. A summary of the international evidence was recently outlined in a Grattan Institute report, *Making Time for Great Teaching,* which notes "…the best professional development teachers can receive is to directly help them teach their students" and a "big stumbling block is the failure to provide the necessary time for effective professional learning programs." Similarly, teachers report that the structure of TPL, as opposed to other forms of professional learning, provides the time to not only learn about new knowledge and skills, but to trial and implement them, reflect upon their impact, and then continue the learning.

[1] Hattie (2009) notes the average effect size of improvement initiatives in education is 0.4, although caution should be had interpreting these results as they are based on teacher self-reporting of student outcomes from a pre and post survey.

When compared with previous inquiries focused on creating broader change across schools, TPL in 2013 produced more immediate changes to teacher practice. Generally, outcomes cited by students were clearer and stronger when teachers described greater changes in classroom practice. This supports the proposition that **short-term outcomes for students were generally stronger when the inquiry directly involved and affected classroom practice**.

There also appeared to be an ideal balance between having time to reflect, and having time to implement changes. There were examples in the case studies where teachers were not prompted to deepen their thinking or trial different responses to the identified student need. However, there were also examples where teachers were prompted to reflect upon and deepen their thinking, without time to plan and trial changes in their practice. These teachers became frustrated at understanding the theory while at the same time being unable to change their practice to affect the students' learning. While conclusions cannot be drawn about where this ideal balance lies, many teachers nevertheless achieved such a balance. Changed practice flowed through to student outcomes. The changed teacher beliefs and attitudes often flowed once teachers saw the student outcomes that resulted from the changes in practice. Where this ideal cycle was occurring (pictured below), this in-turn provided motivation to continue and progress the inquiry.

Figure 1: **The 'ideal' cycle of motivation to undertake inquiry in the case studies**



The focus on inquiries being so closely tied to individual teacher practice and classrooms means that more teachers were experiencing this 'ideal' cycle. In other words, teachers undertaking an evidence based professional learning cycle, closely tied to their classroom and observing changes in student outcomes, were more likely to also experience this 'ideal' cycle of motivation.

The focus on individual teacher practice also prevented most inquiries from relying on school authorisations or administrative changes to implement the aims of the inquiry, as the aims of the inquiry were within their sphere of influence (i.e. in their classrooms and with their students).

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All case studies were linked to identified school needs, and **nearly all were already sharing their learnings with others in their school**, but for most this was being done from a basis of (a) application of learnings;

and (b) understanding of 'what works'. Teachers commented that this meant they had both practices and resources that were developed and tested, which made it easier to share with other colleagues.

Support was essential for teachers to undertake successful TPL inquiries. In general, teachers were supported by the Induction Day and Support Program, their school and by collaborating with colleagues. Important sources of support included access to external expertise or evidence; school leadership and administrative support; and collaboration with other teachers.

- **Sources of external support were important** (such as the professional learning provided through the Induction Day and Support Program) to provide learning about how to undertake the inquiry, but additional professional learning was required by many into their area of focus.
- **School leadership and administrative support was critical**. In 2013 all case studies enjoyed good leadership support, with many noting the value of principals (or their delegates) attending the Induction Day. All case studies were linked to identified school needs, and were balancing and linking this with inquiring into their individual needs as teachers. Reflecting the current pedagogical and policy trends in the education system (and therefore many schools' priorities), many inquiries were focused on individualised learning, self-directed learning, inquiry-based learning, collaborative teaching practices, numeracy, and/or literacy. School leadership and administrative support also remained important for teachers accessing the TPL time in a manner that was most effective for their inquiries. Teachers that had the support of peers, parents and students also noted these as useful for undertaking their inquiry.
- **Collaboration was another very important source of support**. All case studies reported that working as a team was one of the most important enablers of their learning. In all case studies where multiple teachers had been approved within the school they worked as a team. Teachers were also often sharing their learnings with other colleagues in the school and beginning to collaborate with them on the inquiry's area of focus, such as by incorporating their feedback. Some were also collaborating with teachers in other schools. The support provided by connecting with other teachers inquiring into practice was also reflected by the value teachers placed on the networking provided through the Support Program. Some teachers noted this networking was the best part of the Program, while some also suggested it should be more targeted such as through groupings for the program being based on student needs (areas of focus) and/or split between primary and secondary school teachers. Logically, networking can become collaboration more easily when the student needs being investigated are similar.

This report goes on to discuss some further considerations. The **overall delay in approval of TPL in 2013 created a flow-on effect of delaying many inquiries**. There was also less early focus on refining inquiries to be specifically achievable. Also, the Support Program was also not rated as strongly as a support in comparison to previous years. In the formulation of future policies and/or programs, other considerations that arise from the evaluation of TPL 2013 include:

- The role of accountability regarding the access and use of days by teachers
- Access to expertise regarding how to respond to identified student needs
- The potential benefits of creating additional flexibility
- Equity in access, as it appears that many schools may never have accessed TPL, while others accessed it multiple times
- The benefits of providing pre-existing evidence collection tools or examples or networks related to previous inquiries into similar areas
- With the new Teacher Led Research targeted towards high performing teachers, there is potentially now limited availability of teacher-led inquiry programs for newer or younger teachers

- How teacher-led research or inquiry can be more embedded within more schools, including their professional development processes and timetable scheduling.

Finally, it is clear from the multiple sources of evidence collected as part of this evaluation that overall the teacher-led TPL professional learning in 2013 was closely tied to improving students' learning, and was successful in its aims. Synergistiq wishes to thank the teachers and school leaders for their time contributing to this evaluation.

Introduction

This is the final report for the evaluation of the 2013 cohort of Teacher Professional Leave (TPL). It has been prepared for the Department of Education and Early Childhood Development (DEECD). It provides information based on data collected from twelve case studies and two surveys of the cohort, as well as application data, and meetings with DEECD's Quality Workforce Unit and the provider of the TPL Induction Day and Support Program; EdPartnerships.

It contains findings primarily in relation to:

- The use of evidence
- The changes for teachers
- The changes for students
- Critical supports.

It also provides more in-depth discussion on several key findings, as well as some further considerations.

Background

TPL provided time release for teacher-led inquiry into teacher practice. It supported teachers to use an Evidence-Based Professional Learning Cycle through the provision of an Induction Day and Support Program, facilitated by EdPartnerships. Participants applied to inquire into: "What do I need to learn and do differently in my teaching to improve outcomes for my students?" Participants were encouraged to select one of their classes to use as an 'evidence-group' for the year.

The purpose of the evaluation was to examine the impact of TPL on improving the quality of teacher practice and improving outcomes for students. The evaluation sought to answer two overarching questions:

- Has the quality of teacher instructional practice improved as a result of participation in TPL?
- Are there examples of improvements in student outcomes resulting from teacher participation in TPL?

Understanding that many of the intended outcomes of the program will not be realised until after the evaluation has concluded, the evaluation questions (see Appendix A) focussed mainly on the short and medium-term outcomes detailed in the Program Logic (see Appendix B).

Methodology

The evaluation methodology included case studies and surveys, which are described in more detail below. Some key development and prior reporting is also outlined below.

Case studies

The case studies were developed through an in-depth investigation with TPL participants at 12 schools. This represented a sample of 12% as there were a total of 98 schools with TPL teachers in 2013.

Two site visits were conducted at each of the 12 schools. The first site visits were completed at the beginning of Term Three 2013; and the second took place in Term Four 2013. Our investigation included participants' use of TPL; the outcomes achieved; and the factors that most influenced outcomes. In addition, we focused specifically on the activities associated with the evidence-based professional learning cycle. At each site visit, we held semi-structured focus groups with the TPL teachers and interviewed the Principal or their delegate. Additional teachers were included in the focus groups if the participating school

had provided time release for those teachers to work as a team with the TPL teachers. The second site visit also included a focus group with students. These students were recruited from one of the teacher's 'evidence groups'.

These twelve case study schools were selected to be representative of the 2013 TPL cohort, including a process of randomised stratified sampling that ensured there was no bias in the selection process. These ensured representative distributions across the following characteristics:

- School type (primary, secondary, P-12 college, or special needs)
- Region (based on DEECD regions)
- Whether the schools were in a regional or metropolitan area
- Number of TPL participants at the school
- Socio-economic status.

Appendix C displays the stratified sampling distribution across these criteria, as agreed with DEECD.

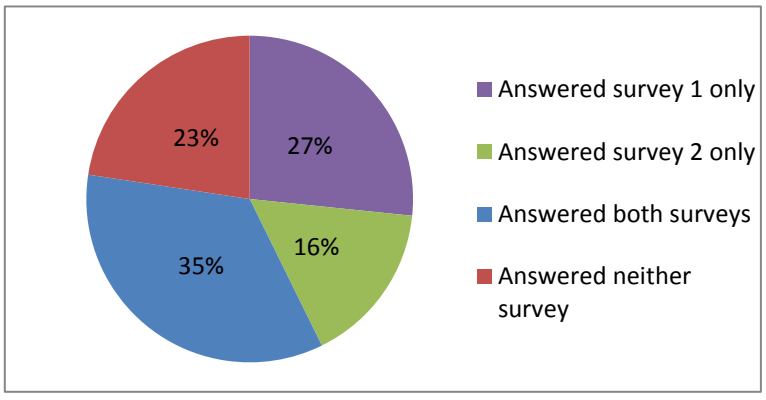
Surveys

The surveys were sent to all participating teachers in the 2013 cohort.

The first survey was sent at the end of Term Two. It asked participants to respond to some additional demographic questions (to complement the application data); to reflect back to before they commenced TPL and rate themselves across a number of measures; and to provide feedback on the Induction Day and the first day of the Support Program. It received responses from 121 participants, representing a response rate of 61%. Of these, 12 partially completed the survey.

The second survey was sent at the end of Term Four. It asked about participants' experiences of TPL and the outcomes achieved across several measures. It also asked for participants' suggestions for future programs. It received responses from 104 participants, representing a response rate of 54%. Of these, 17 partially completed the survey.

Figure 2: **Proportion of TPL participants, by response to evaluation surveys**



Tests of statistical significance are noted in this report. These are based on Chi-Squared tests for comparisons between the first and second survey responses, and Two-Tailed T-tests for correlations of variables against outcomes. All are based on a confidence level of 95% ($p<0.05$).

It should be noted that teachers in the second survey were asked if Synergistiq consultants had visited them as part of the case study process. 20% of respondents said 'yes' compared to the overall 12% sampling rate of the case studies. This indicates a bias in the survey results towards those teachers already more engaged with the evaluation through the case study process. However, with 80% of respondents not previously involved, and our tests of significance set at 95%, there remains a high degree of reliability in the findings.

Development and reporting

The Evaluation Framework was finalised in June 2013, after close consultation with DEECD. It was based on those from previous years' evaluations of TPL, as well as discussions with DEECD about the changes made to the program for the 2013 cohort. Based on the Evaluation Framework, a Research in Schools application for the student focus groups was submitted on 23 July, and was approved on 27 August.

An Interim Report was provided to DEECD in July 2013. This discussed early themes and initial changes in teacher practice. This report was used to inform the development of the second site visit questions and the second survey.

Early findings were shared and discussed with DEECD in December 2013 to inform further analysis of key themes.

Findings

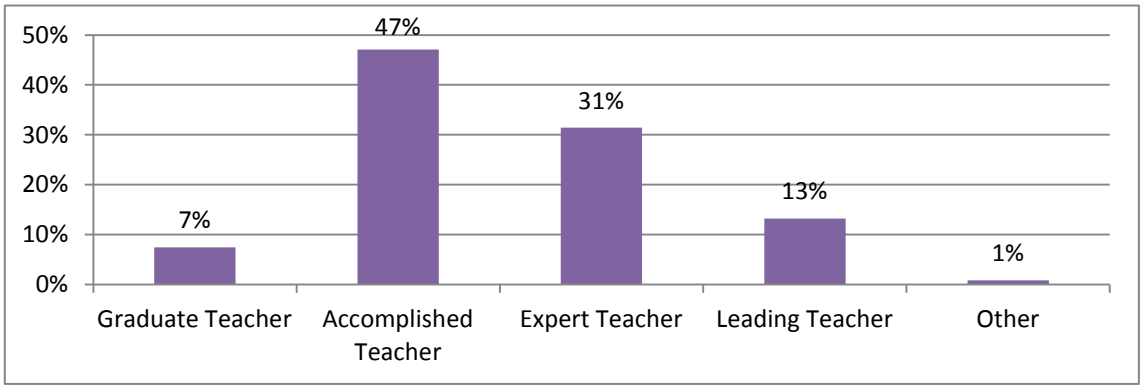
This chapter commences by outlining the demographics of the TPL teacher cohort in 2013, their TPL time, and their schools. It then discusses in detail the findings relating to:

- The TPL teachers, their schools, and the use of the TPL time
- The use of evidence, including identifying student needs; identifying professional learning needs; measuring changes in teaching practice; measuring changes in student outcomes; measuring changes in the wider school community; and developed knowledge and skills for collecting and using evidence
- The changes in teacher discipline/content knowledge; practice/pedagogy; and attitudes and beliefs
- The changes in student discipline/content knowledge; capabilities and skills; and attitudes and beliefs
- The impact on the wider school community
- Critical supports for teachers undertaking inquiry, including the Induction Day; Support Program; practical resources; and collaboration
- Other findings, including overall facilitators and hindrances for TPL success; accountability for access to TPL time; and teacher characteristics for independent evidence-based inquiry.

The TPL teachers

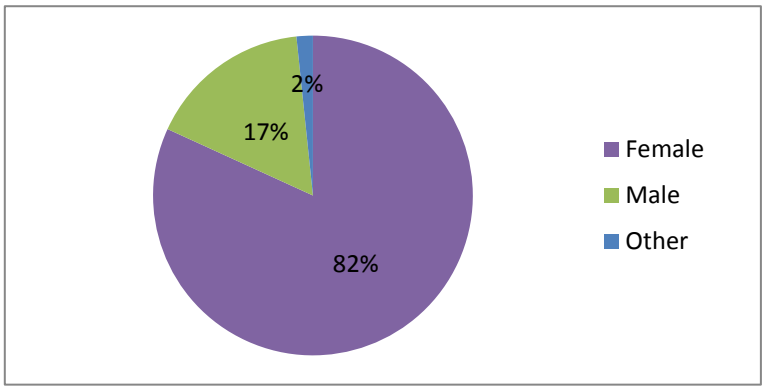
In total, 198 teachers were granted TPL in 2013.

Figure 3: **Position at the time of application (by proportion of TPL respondents, fist survey) n=121**



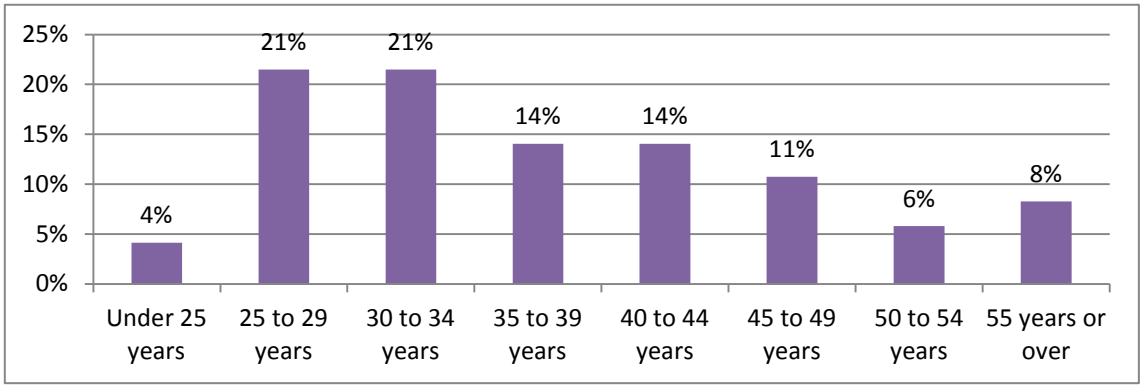
Almost four-fifths (78%) of TPL teachers were in the middle bands of Accomplished Teacher or Expert Teacher when they applied for TPL. The 'Other' category shown above was one respondent who indicated they were a Principal. In the second survey (conducted later in 2013) respondents were asked if their position had changed since their application. One in ten (9%) indicated that it had. Generally they indicated promotions had occurred.

Figure 4: **Gender (by proportion of TPL respondents, first survey) n=121**



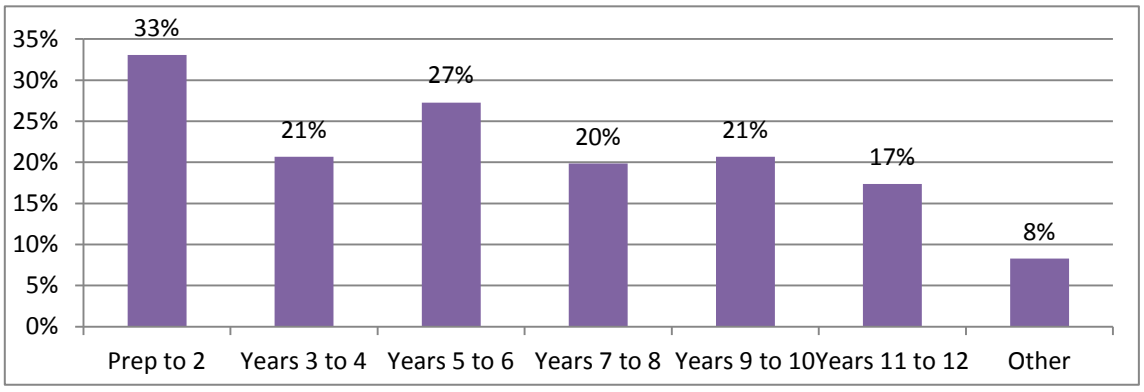
Approximately four-fifths (82%) of TPL teachers were female.

Figure 5: **Age (by proportion of TPL participants, first survey) n=121**



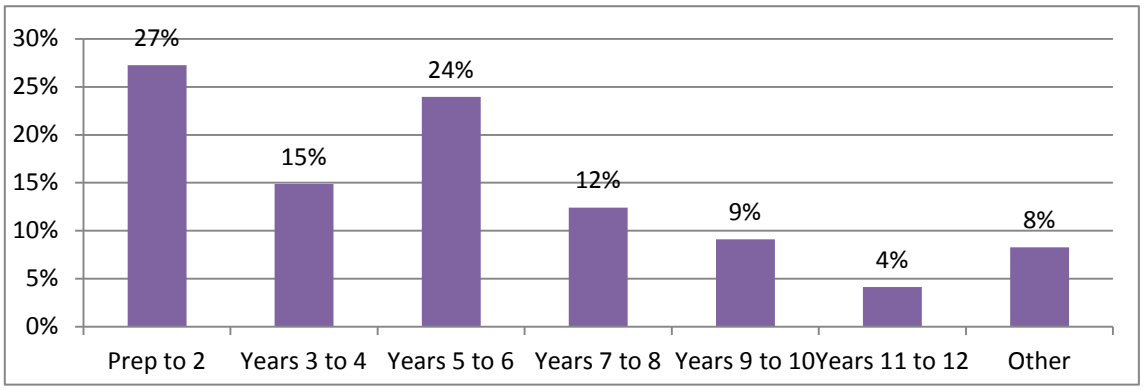
Two-fifths (42%) of teachers were aged in the younger demographics of 25 to 34; the most prevalent age groups. Three-fifths (60%) were aged under 40. The remainder spanned up to over 55 years.

Figure 6: **Year levels taught (by proportion of TPL respondents, first survey, select all that apply) n=121**



One-third (33%) of TPL teachers taught Prep to Year 2, with the next most prevalent year levels taught being Years 5 to 6 (27%). Overall primary school years were more prevalent than secondary school years. Around one-sixth (17%) had VCE or equivalent classes teaching Years 11 to 12. Under the 'Other' category there were four special education teachers, four literacy coaches and two generalist coaches.

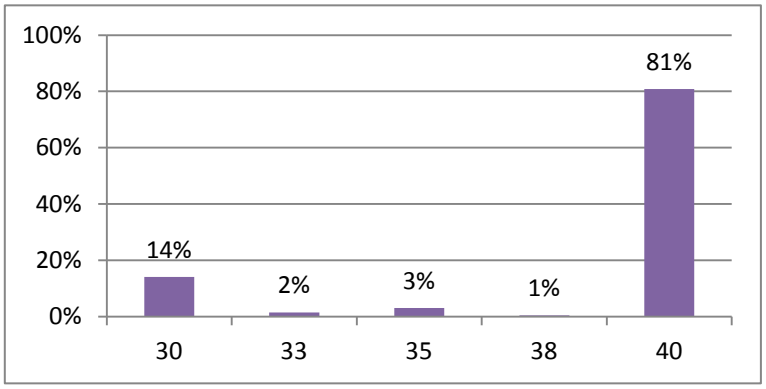
Figure 7: **Year level of evidence group (by proportion of TPL respondents, first survey) n=121**



The evidence groups selected were most commonly in Prep to Year 2 (27%) and in Years 5 to 6 (24%). Again, primary year levels were more prevalent than secondary year levels. The VCE years were the least prevalent year levels used as an evidence group (4%). Under 'Other' five respondents noted they had multiple evidence groups that spanned year levels (such as P-6), three respondents from special education had evidence groups defined by age brackets rather than year levels, two respondents said they were using the whole school, and one respondent said their evidence group was teachers.

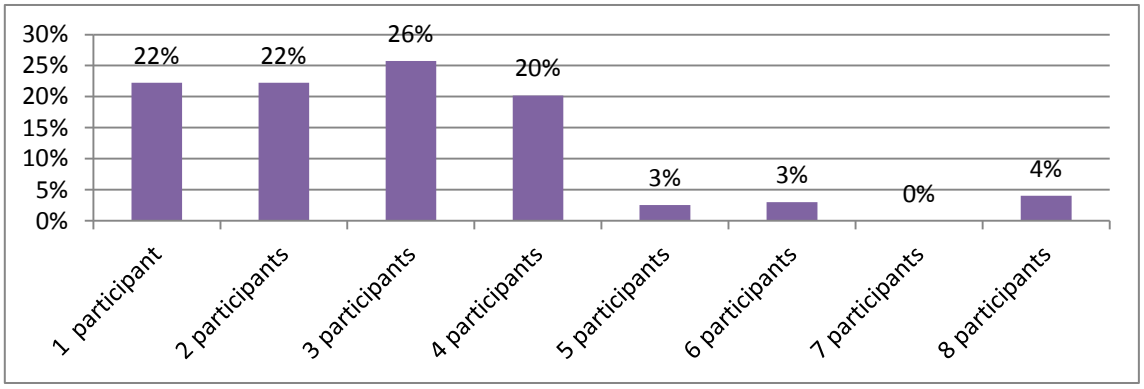
The TPL teachers' time

Figure 8: **TPL days sought and granted (by proportion of TPL teachers, program data) n=198**



In 2013, if the TPL application was successful, the number of days sought were the number of days granted. Four-fifths (81%) of TPL teachers sought and were granted the maximum 40 days. Most of the remainder of teachers sought and were granted the minimum 30 days, with 6% spread in between 30 and 40 days.

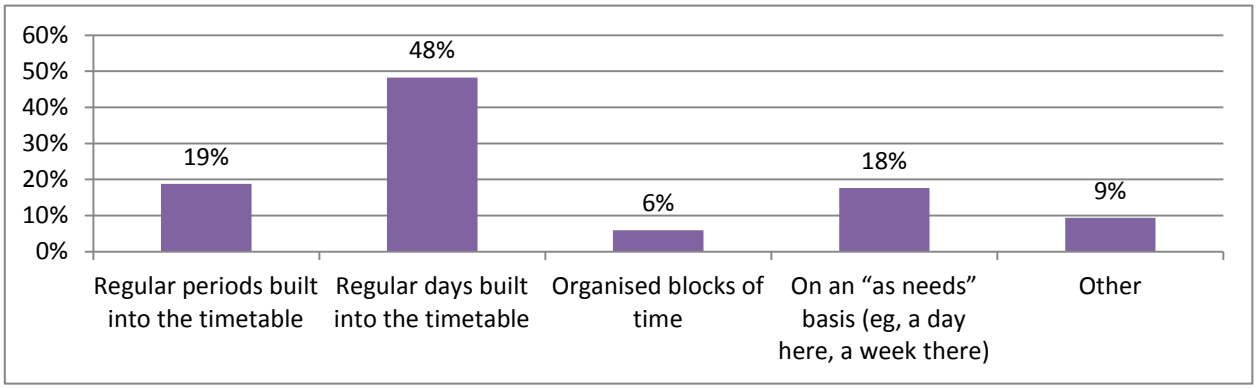
Figure 9: **Number of TPL participants at the same school (by proportion of TPL teachers, program data) n=198**



Four-fifths (78%) of TPL teachers undertook TPL concurrently with other teachers from their school. The majority (68%) had 2 to 4 teachers approved through TPL. One-fifth (22%) had a single teacher approved.

The remainder (10%) had 5 to 8 teachers approved at their school. The extent of collaboration between TPL teachers is explored further under 'Collaboration'.

Figure 10: **Structure of TPL time (by proportion of TPL respondents, second survey) n=85**

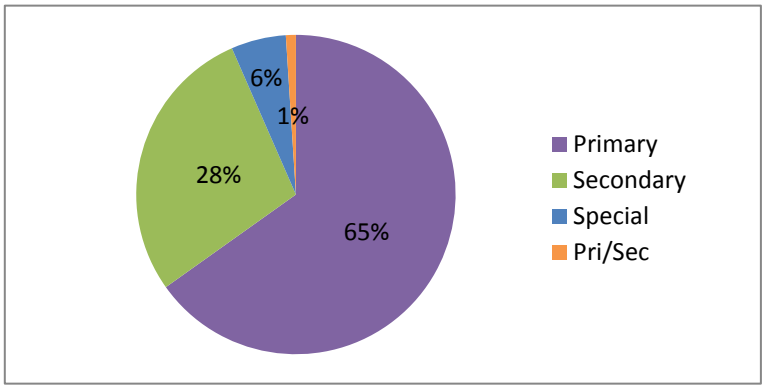


Nearly half (48%) of TPL teachers accessed their TPL time as regular days built into their school's timetable. Around one-fifth (19%) had regular periods built into their timetable, while a further fifth (18%) accessed their TPL on an 'as needs' basis. The remainder accessed their TPL time as blocks of days or weeks together. Those under 'Other' mostly indicated that they varied across the year. Access to TPL time is discussed further under 'Other findings'.

The TPL teachers' schools

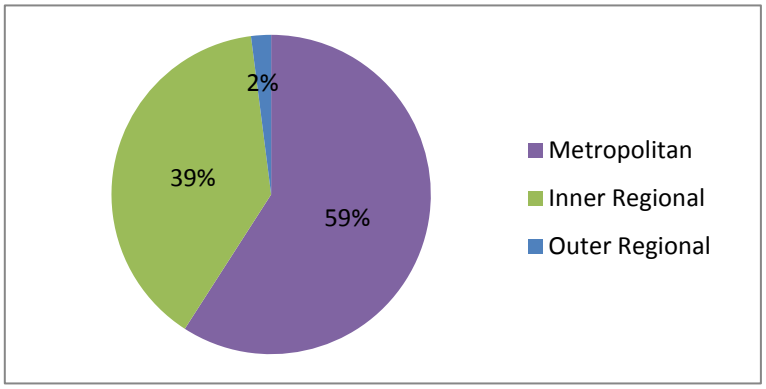
In total, 98 schools had teachers undertaking TPL in 2013.

Figure 11: **Type of school (by proportion of TPL teachers, program data) n=198**



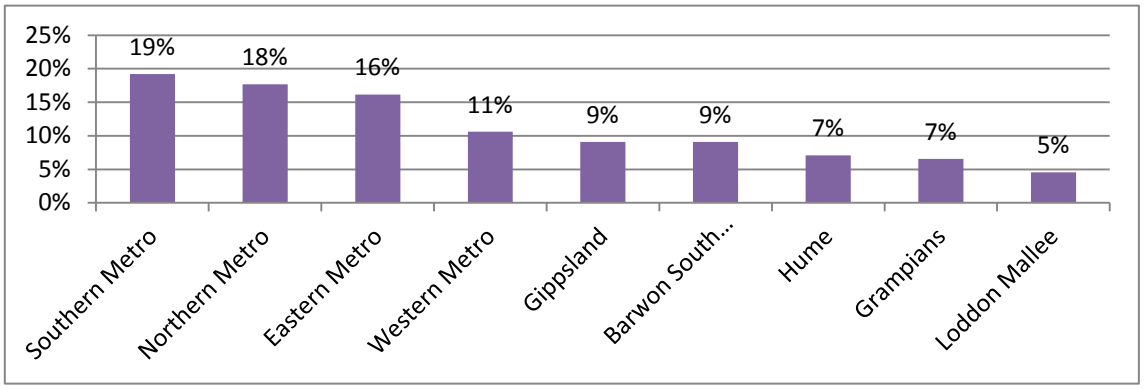
Almost two-thirds (65%) of TPL teachers were from primary schools, while just over one-quarter (28%) were from secondary schools. The remainder were from special schools (6%) or primary/secondary colleges (1%).

Figure 12: **School location (by proportion of TPL teachers, program data) n=198**



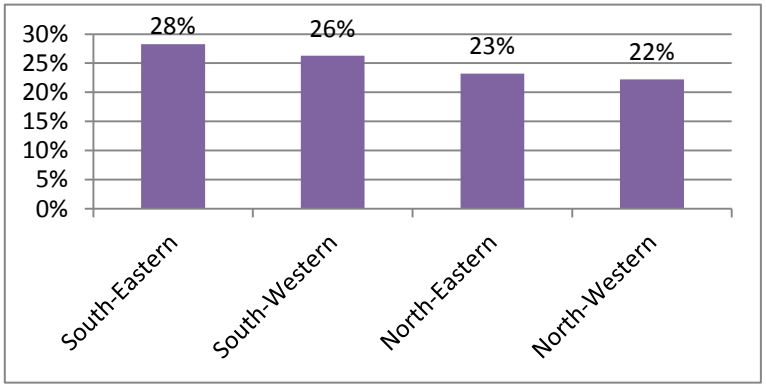
Most TPL teachers were from schools (59%) in metropolitan areas, while two-fifths (39%) were from schools in inner regional areas. The remainder (2%) were from schools in outer regional 'remote' areas.

Figure 13: **Previous school region (by proportion of TPL teachers, program data) n=198**



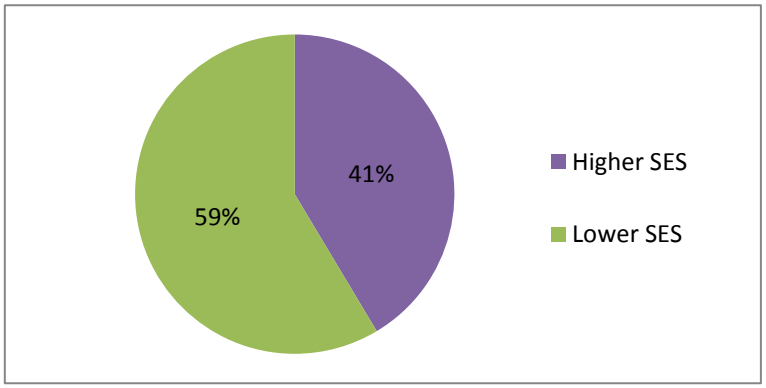
Under the previous DEECD regions, most TPL teachers were from the metropolitan regions, with Southern Metropolitan (38 teachers) having the most, followed by Northern (35), Eastern (32) and Western Metropolitan (21). Outside of metropolitan, Gippsland and Barwon South West had the most TPL teachers (18 each), followed by Hume (14), Grampians (13), and Loddon Mallee (9).

Figure 14: **Current school region (by proportion of TPL teachers, program data) n=198**



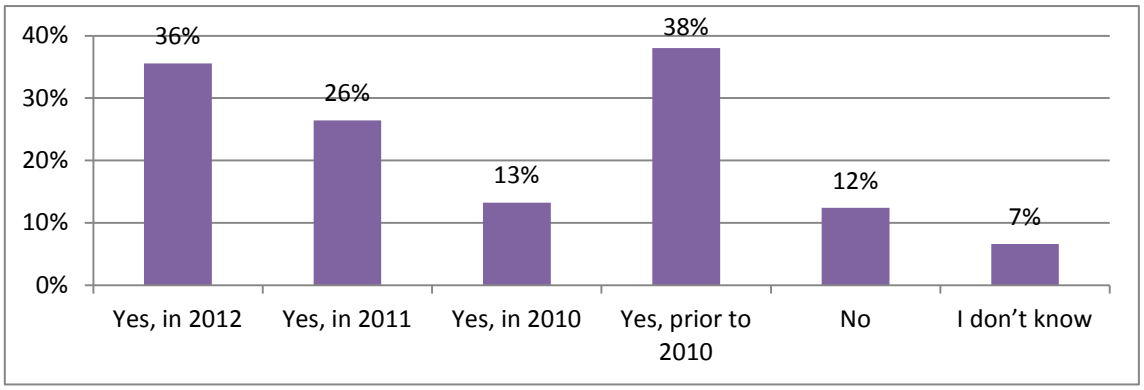
Under the new DEECD regions, South-Eastern had the most TPL teachers (56), followed by South-Western (52), North-Eastern (46) and North-Western (44).

Figure 15: **School socio-economic status (by proportion of TPL teachers, program data) n=198**



According to socio-economic status (SES), most TPL teachers were from lower SES schools (59%).

Figure 16: **Previous TPL at school (by proportion of TPL respondents, first survey, select all that apply) n=121**

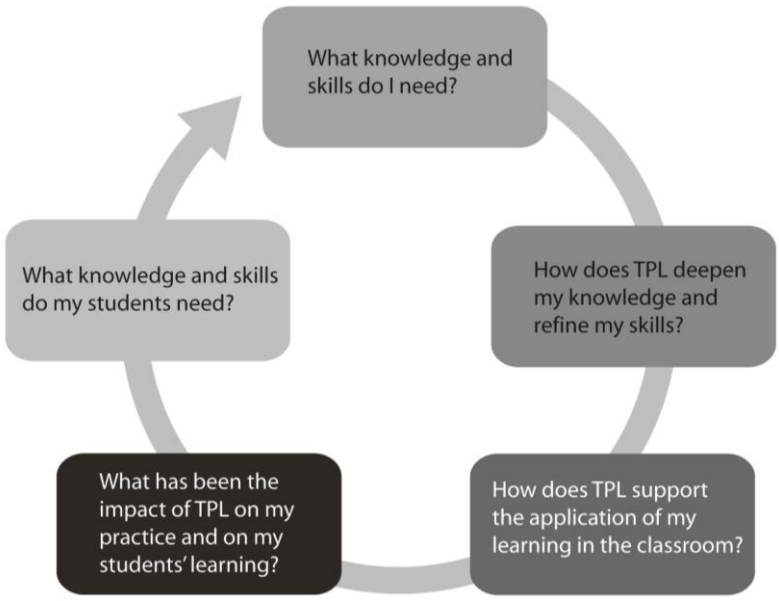


Overall four-fifths (81%) of TPL teachers indicated that teachers at their school had had TPL in the past, at least once. One-third of all responses (31%) indicated TPL had been received across multiple years. One-eighth (12%) indicated that teachers at their school had never received TPL before, while 7% did not know whether teachers had or had not.

Evidence

The use of evidence by teachers to underpin their professional learning inquiry was a key investigation of this evaluation. This section describes the findings in relation to the use of evidence, analysed against the stages of the professional learning cycle.

Evidence Based Professional Learning Cycle



Adapted from Timperley 2009[2]

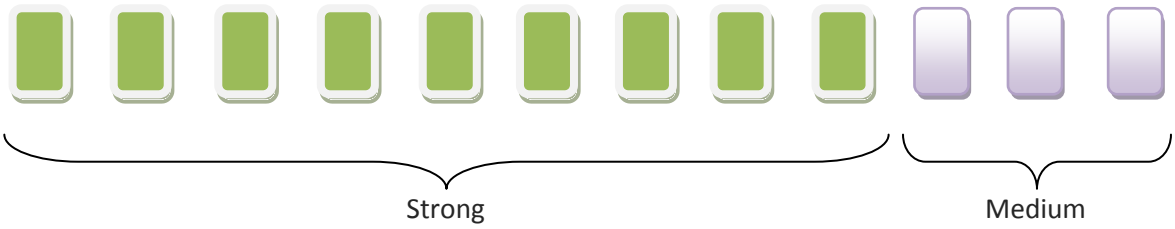
> **To be effective every teacher needs to be engaged in evidence-informed inquiry into their practice every day they teach.**[3]

[2] Timperley (2009) p4

Identifying student needs

Identifying student needs was the strongest purpose for teachers using evidence. To begin with, the TPL applications required teachers to articulate the student need they were seeking address through their inquiry, and describe the evidence they had used to identify this need. Teachers in each case study had clarity about the student need they were seeking to address through their inquiry. As displayed in Figure 16, nine case studies (75%) had a strong focus as part of their inquiry on using evidence to identify student needs. This included using evidence collected in their classroom; designing and using multiple evidence sources; and/or collecting multiple rounds of evidence across the duration of their inquiry. The other three case studies (25%) primarily relied on broader school identified evidence, such as NAPLAN or On Demand data to identify student needs.

Figure 17: **Extent of case studies' focus on using evidence to identify student needs**



For the case studies with a strong focus on using evidence to identify student needs, many of these were assisted by being in schools that had focuses on using evidence. This was generally associated with providing differentiated learning (also known as personalised or individualised learning).[4] Many of these teachers appreciated using the TPL inquiry to strengthen their knowledge, skills and develop targeted resources to identify student needs, and were sharing these more broadly across the school or team.

> **Three teachers applied for TPL on a common platform of implementing differentiated learning for their students. The school context was important, with previous TPL in the school used to implement differentiated learning, and with the Principal having a strong belief about its merits. There were similarities and differences across the three teachers in how they applied differentiated learning, across their subject areas of language, interactive digital media and English. A common element was to have initial discussions with their students in order to make the intended teaching changes transparent and obtain the students' 'buy-in'. A further common aspect was to develop individualised learning profiles for each student. These profiles typically provided students with choice about how they learn, how they were assessed, and more 'one on one' time. This was obtained in some cases by discussion with the students and in other cases through a survey. They also connected with teachers from neighbouring schools who were applying differentiated learning in their respective subject areas and spent time researching, testing and fine-tuning their approach and tools. (Case study extract)**

The practical resources provided at the TPL Induction Day and Support Program helped ten case studies (83%) to identify student needs. The most useful resource was the student survey variously known as the student profiling, learning power, and the traffic light activity. Four case studies described in detail how

[3] Ibid. p10
[4] For example, see DEECD (2010) *Coaching Teachers in Effective Instruction*. Available at: http://www.education.vic.gov.au/Documents/about/programs/archive/coachteach.pdf

they changed their practice in response to the evidence collected, and a further four made at least some changes in response to the evidence collected. Other common forms of evidence used to identify student needs included:

- Compiling previous school results including On Demand and NAPLAN data
- Designing pre-tests, surveys and interviews
- Using ongoing student work samples, journals, tests, rubrics, and filming.

Those teachers using ongoing, classroom-based evidence collection about student needs throughout their TPL inquiry were more likely to describe multiple and ongoing evidence-based inquiry cycles. Those teachers that used broader school-identified student needs (such as NAPLAN) at the beginning of the year, and did not continue to revisit it, were more likely to undertake a process similar to a single inquiry cycle across the year. In the latter, teachers spent much of their time designing, trialling and perfecting the appropriate response to a single set of identified student needs – thus exploring these needs more in-depth however not exploring various other student needs that arose through the evidence collection.

To analyse the evidence collected, teachers often created spreadsheets or folders that collected multiple sources or pieces of evidence against individual students. All of the teachers in the case studies discussed and worked collaboratively with other teachers to discuss and analyse the evidence collected, rather than working individually. Such collaborative practices were evident even where the teacher had been approved for TPL individually or where they had different evidence groups. This suggests collaboration is particularly important for teachers when making sense of the student evidence collected, and determining how to respond.

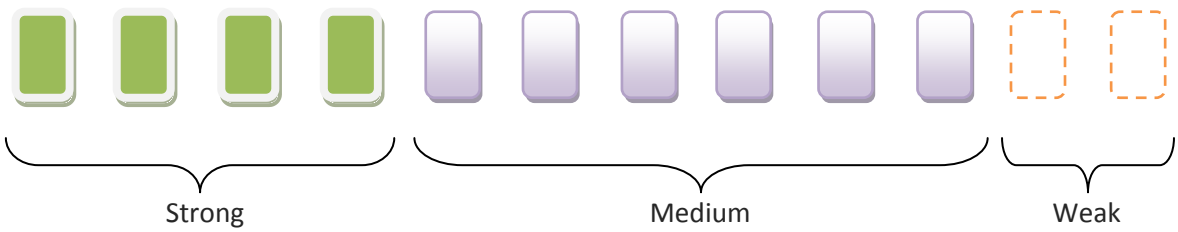
Many teachers described how they were using more evidence about student needs as part of their TPL year than in previous years. Many also had plans to continue next year, although generally were considering how they will do it more efficiently without the TPL time.

Identifying professional learning needs, based on identified student needs

While teachers in all case studies had clarity about how their professional learning focus would address student needs, less evidence was used than when those same teachers were identifying student needs. Although the TPL applications required teachers to articulate what they wanted to change about their practice (including content/curriculum, pedagogy or assessment), and what evidence they used, such evidence was not universally referred to by the case studies.

Regarding the use of evidence to identify professional learning needs, four case studies (33%) had a strong focus on this as part of their inquiry. These case studies were regularly using evidence to identify their professional learning needs. Sources of evidence included peer observations, filming of teaching practice, professional reading, access to professional learning, or comparison against instructional models. A further six case studies (50%) at least partially used evidence to identify professional learning needs. Two case studies relied on advice from school leaders or colleagues about the best response or strategy to address the identified student need without undertaking further investigation.

Figure 18: **Extent of case studies' focus on using evidence to identify professional learning needs**



The four case studies that were strongly focused on using evidence to identify professional learning needs also had clarity about how their professional learning focus would address the identified student needs. An additional three case studies had access to external expertise, or were confidently using pre-defined and evidence-based pedagogical approaches. As such, seven case studies (58%) strongly described how their professional learning focuses would address the student need. These case studies could be characterised as primarily undertaking an evidence-based inquiry into *identified student needs*.

> **NAPLAN data had caused the school to reflect on its approach to the teaching of literacy; student results were not so much a concern, but the rate of growth in learning was. In the area of reading, students were assessed to be good at decoding, fluency and expression, however their discussion of text was not at the desired level; their reading was literal. Two teachers applied for TPL to advance their knowledge of explicit teaching in comprehension strategies and to capacity build staff across the school. The TPL participants had already been researching and trialling Keay Cobbin's literacy methods in their own classrooms. The teachers examined the students' interests and worked hard to source significant numbers of books to make reading fun.**
>
> **The team was gathering evidence in a multitude of ways regarding their own practice and the impact of their work upon student outcomes. They understood the important link between gathering evidence and reflecting on pedagogy. *"We had to improve the quality of the explicit teaching, or else we weren't going to improve the outcomes for students. If we could see that our students had moved and grown – it was a reflection that the teaching was making the impact. As teachers we had a real motivation to see that what we were doing was bringing about the change."* (Case study extract)**

The other five case studies (42%) relied on prior school approaches, advice from peers or leaders, or assumptions about how best to respond to the identified student need. These case studies could be characterised as primarily undertaking an evidence-based inquiry into a *response to an identified student need*. While these case studies were still addressing student needs, their focus was primarily on implementing a specific response or strategy (often agreed with the school beforehand). As student needs and learning profiles became more known throughout the inquiry, responding to these were incorporated into the design of the specific response or strategy, rather than, for instance, trialling new or different responses or strategies.

> **Three teachers wanted to increase their focus on supporting lower achieving students. When these students were given feedback about their performance they often did not understand the feedback or how to respond to it, and were discouraged by low marks. The teachers saw that the assessment and feedback process and the students' inability to respond did not help to progress their learning. During the early phases of planning the TPL the focus shifted somewhat to align it with the broader school goals of extending the full spectrum of students, including high achievers. These early discussions also helped align the TPL to the schools culture of refection, best practice and use of evidence. The teachers used their TPL to develop and trial several rubrics to clearly communicate expectations of learning and assessment. It included criteria for grading which could be understood by the lower achieving students but had sufficient scope so it also worked for the higher achieving students. (Case study extract)**

The survey responses also demonstrated teachers' greater proficiency in identifying student needs, and selecting a particular response or strategy, rather than undertaking an inquiry into identifying professional

learning focuses. In the survey when teachers were asked to describe how they had identified what they needed to learn in response to their identified student needs, the main theme (42%) was a description of what the focus of their learning was, not how they had identified it.

> ***I needed to learn more about inquiry learning and how to successfully implement this into a Prep/One setting.*** **(Survey response)**

The next main theme was using research to identify the professional learning focus, including research into various pedagogical approaches (28%).

> ***I needed to do some educational reading on differentiated learning and assessment. I needed to investigate ways to learn about student interests and profiles.*** **(Survey response)**

Discussions with colleagues or school leaders (16%) to identify the professional learning focus was the next most prominent theme.

> ***… Spoke to other professionals, [and] my principal.*** **(Survey response)**

Undertaking professional learning in the target area of student needs was another key theme (10%).

> ***I went to professional development courses tailored to teaching writing, which shaped my understanding of where gaps in my current teaching [were] …*** **(Survey response)**

Using student evidence (including tests such as On Demand and ELLI, interviews, and scaffolded samples of work) was also listed by some teachers (9%).

> ***I gathered interview based assessments and learning style data about the children. …*** **(Survey response)**

School visits also assisted some teachers to identify their professional learning focus (5%).

> ***… Expert advice on which schools to visit and teachers to observe best practice.*** **(Survey response)**

Around one in eleven (8%) described that what they needed to learn was simply obvious from the identified student need, or that the student need was obvious.

Similarly, teachers involved in case studies reported that research into various pedagogical approaches was one of the strongest evidence sources related to professional learning needs. This included researching, trialling and refining specific pedagogical approaches. These were usually pre-defined approaches with an evidence-base behind them, such as Café conferencing, Daily 5, Kathy Walker Developmental Learning, and Blooms Taxonomy. These approaches provided practical guidance about how to respond to an identified student need, although teachers generally refined them to work most effectively in their context. Comparatively, there was limited use of models of good teacher practice, such as the e^5 Instructional Model, the Principles of Learning and Teaching or other models that define good teacher practice but do not give practical guidance about how to respond to specific, identified, student needs.

Measuring changes in teaching practice

The use of evidence to measure changes in their teaching practice was yet more limited. Generally, teachers only used evidence to measure changes in their teaching practice if they had first used evidence

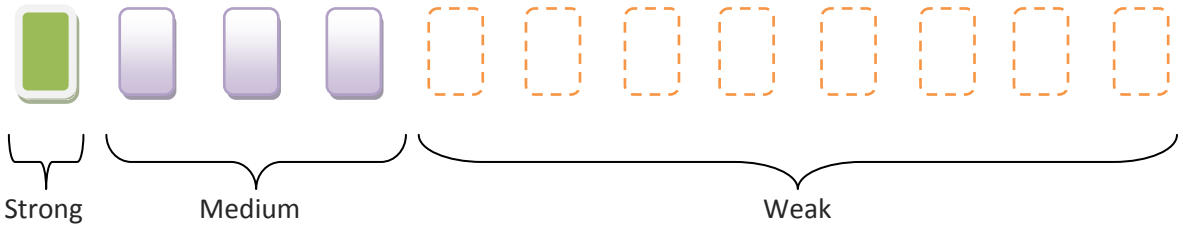
to identify their professional learning needs (which for some became the baseline for measuring changes). Overall, this purpose was the weakest of the purposes for using evidence within the professional learning cycle.

One case study had a strong focus on measuring changes in their teaching practice, as a key focus for them was coaching others in their school.

> **The TPL team ran school-wide workshops in which they asked staff to offer reflective feedback, set goals going forward, and plot themselves on an explicit teaching continuum. The TPL team ran a pre and post reflection exercise with staff after the professional development days. They had also videoed the staff they were coaching speaking about their feelings on explicit teaching and the coaching work. (Case study extract)**

Of the remaining case studies, three (25%) used some form of evidence to measure the changes in their teaching practice over time, such as through regular mentoring or coaching conversations, observations, filming, team teaching or pre and post student feedback surveys. The remaining eight case studies (67%) did not have a focus on using evidence to measure changes in their teaching practice.

Figure 19: **Extent of case studies' focus on using evidence to measure changes in teaching practice**

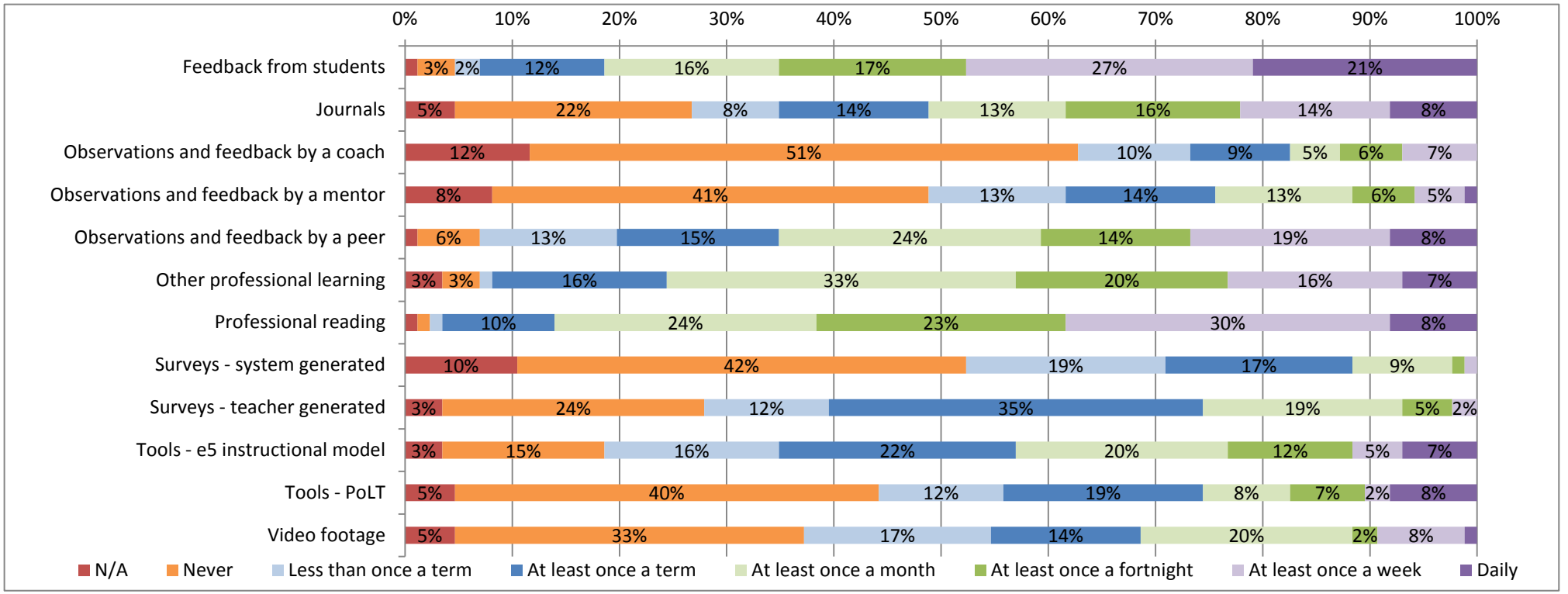


This analysis is tempered by the fact that every teacher in the case studies was regularly having professional conversations and reflections with other colleagues (particularly collaboratively with other TPL colleagues) on their teaching practice, and the changes they had made over time. This included many using student feedback in relation to changes in their teaching practice. However, measurement of changes over time was difficult because many had not collected relevant 'baseline' evidence, or had not formalised the feedback and reflection process with consistent evidence collection or reflection over time. The TPL application required teachers to articulate how they would monitor and measure changes in their teaching practice. While many continued to pay attention to this area, most were not formally and consistently using evidence to measure changes in their teaching practice over time.

Figure 20 (on the next page) shows teachers' survey responses regarding how often they used various forms of evidence to focus on their teacher practice.[5]

[5] Please note the list of evidence sources is based on a similar question asked in the TPL applications.

Figure 20: **In relation to supporting the focus on your *teaching practice*, how often did you use the following evidence sources?**



As seen in Figure 20, key evidence sources that were most commonly used both at least weekly, and at least monthly included:

- Feedback from students (48% at least weekly, 81% at least monthly)
- Professional reading (38% at least weekly, 85% as least monthly)
- Discussions and feedback by a peer (27% at least weekly, 65% at least monthly)
- Other professional learning (23% at least weekly, 76% at least monthly)
- Journals (22% at least weekly, 51% at least monthly).

The other evidence sources and the extent that they were used at least once were:

- e^5 Instructional Model (82%)
- Teacher generated surveys (73%)
- Video footage (62%)
- Principles of Learning and teaching (PoLT) (56%)
- Feedback by a mentor (52%)
- System generated surveys (47%)
- Feedback by a coach (37%).

The initial applications for TPL asked teachers to cite the sources of evidence they had used to identify their teacher needs. The most common sources of evidence cited in the applications were:

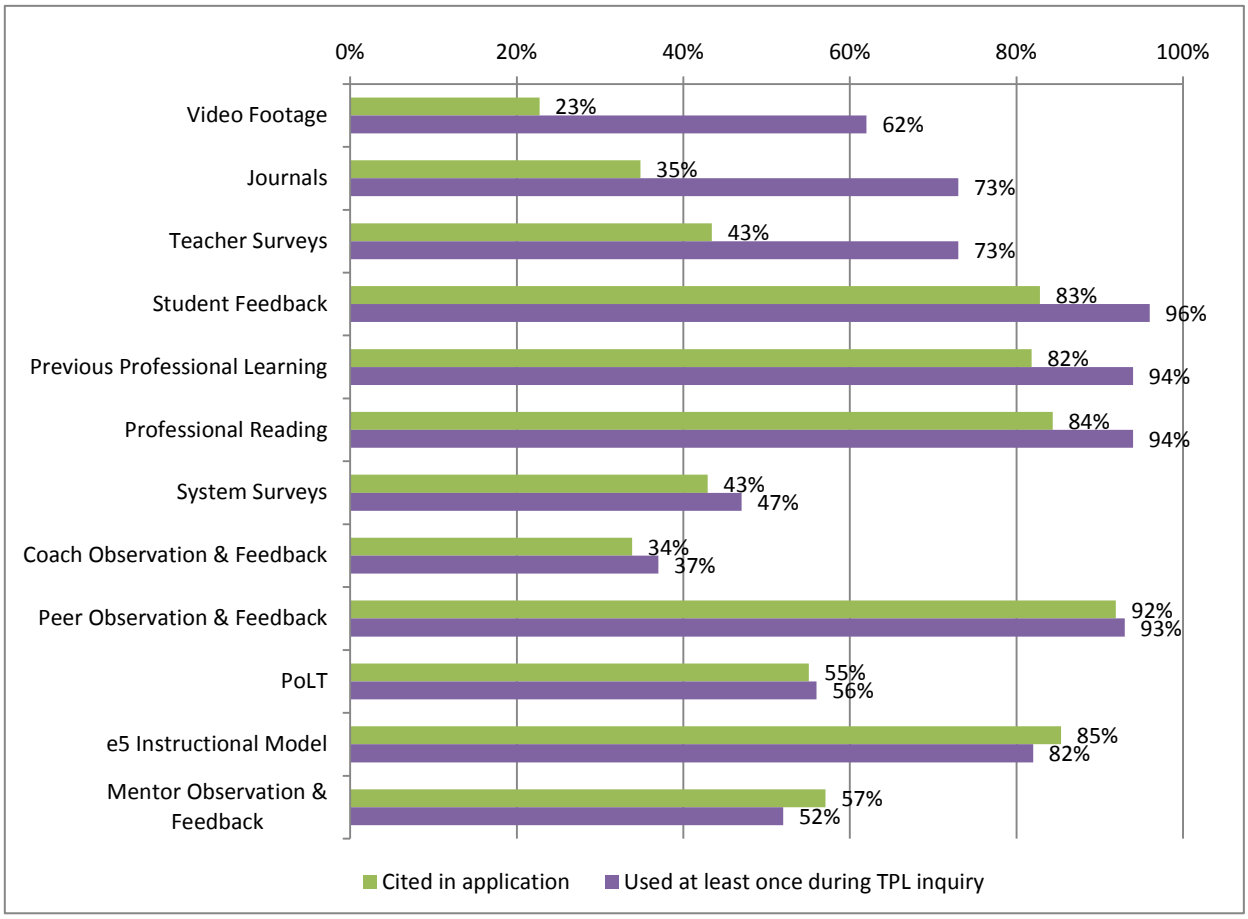
- Peer observations and feedback (92%)
- e^5 Instructional Model (85%)
- Professional reading (84%)
- Student feedback (83%)
- Previous professional learning (82%).

When comparing the sources cited at the time of application and those used during the TPL inquiry, as shown in Figure 21, the largest increases were using:

- Video footage (23% cited it in their application compared to 62% who indicated they had used it by the end of their TPL inquiry)
- Journals (35% compared to 73%)
- Teacher generated surveys (43% compared to 73%).

Two sources were used less than cited in the application; the e^5 Instructional Model and feedback by a mentor.

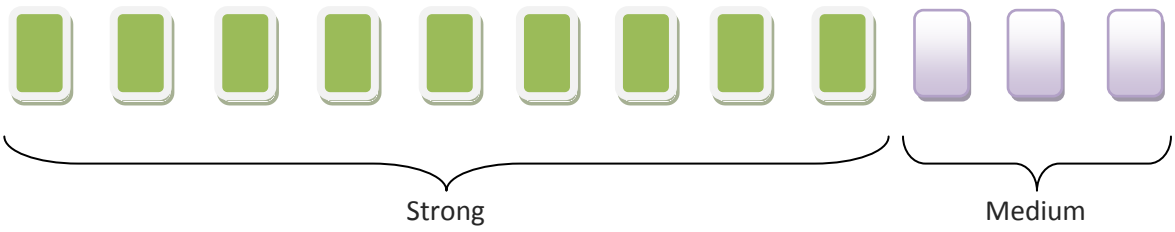
Figure 21: **Comparison of teacher-focused evidence sources cited in applications versus sources indicated as used at least once during the TPL inquiry (application data n=198, second survey n=87) (ordered by largest difference)**



Measuring changes in student outcomes

After using evidence to identify student needs, many case studies continued to use evidence to measure changes in student outcomes. Nine case studies (75%) had a strong focus on using such evidence through collecting multiple sources of evidence, undertaking evidence collection regularly, and/or developing new resources or practices to collect improved evidence of student outcomes. Teachers described that this built upon and enhanced their standard assessment and reporting practices. For many it also built upon the evidence they had collected to identify student needs. The remaining three case studies (25%) collected evidence on student outcomes, but it was less of a focus for their TPL inquiry and/or they were not attempting to measure changes. Two of these had a strong focus on using evidence to identify student needs, as opposed to measuring outcomes.

Figure 22: **Extent of case studies' focus on using evidence to measure changes in student outcomes**



Across many case studies, teachers noted the difficulty of attributing changes in student outcomes to their TPL. At the same time, these teachers described the changes in their practice as a result of their TPL and how these logically flowed through into the student outcomes they were recording. Teachers also noted

the difficulty in mapping the extent of changes for students. For instance, one difficulty that teachers encountered was collecting relevant and accurate baseline data. Teachers noted that changing the evidence collection tools used made it difficult to compare the student outcomes recorded to those in previous years or even to the baseline data they had collected on student needs. Teachers also noted the difficulty in comparing across student cohorts. Nevertheless, all of these discussions showed many teachers had been focused on measuring student outcomes as a result of their TPL, and highlighted their increased proficiency in using evidence to track student outcomes. Many had plans to continue to use such evidence in future years, describing that it improved their assessment and reporting practices.

Examples were seen in the case studies of teachers using standardised assessments (such as On Demand) at the beginning and end of their TPL year to estimate their impact as a teacher. One case study, which was focused on literacy, was part of a school that undertook On Demand testing twice a year and had an online access portal for year-on-year student-tracked data across the school. One teacher in this case study used a Hattie[6] effect size calculation to estimate their impact as teachers in comparison to standard improvements in student outcomes for a year of teaching.

> ***We fed in our On Demand from the start of the year, and now, in comprehension, we've gone from having more than 40% 1-2 years below, to 8-12% below. Our effect size came out to 0.85 which is 2-3 years growth under the Hattie effect size calculator.*** **(Case study extract)**

In the second survey, teachers were asked: "If possible to describe briefly, what is your most compelling evidence of improved student learning?" The most common theme was teachers describing the changes, without describing how they knew those changes had occurred (30%, 20 responses), such as improved ability to read, improved confidence, body language, engagement, attitude, eagerness, student conversations, and students sharing knowledge with each other.

The next most common themes related to:

- Student self-assessment or self-reflection (including student journals) (15%)
- Formal assessment (SACs, VCE, ATAR, or general 'assessment') (13%)
- Written work (13%)
- Observation (10%)
- Surveys, including standardised surveys (9%)
- Video footage (9%)
- Student interview (including one pre and post interview) (9%)
- Photos (4%)
- Students using particular strategies or the new language (4%).

Other specifics listed included pre and post testing, PM Benchmarking, AusVELS, ABLES, student survey, SACs, CARS, Reading Power and Me Quiz, Rubrics, Nude Food, Fountas and Pinnell, SPAT-R, Sticky Note Thinking Tracks, and Power Standards. Professional discussion and parent feedback were also listed. Others talked about future outcomes expected (NAPLAN, ATAR, GAT).

The TPL application required teachers to articulate how they would monitor and measure changes in student outcomes.

[6] Hattie (2009)

Figure 23 (on the next page) shows teachers' survey responses regarding how often they used various forms of evidence to identify student needs and outcomes.[7] As seen, key evidence sources that were most commonly used both at least weekly, and at least monthly included:

- Observations (77% at least weekly, 88% at least monthly)
- Feedback from students (53% at least weekly, 87% at least monthly)
- Conferencing (44% at least weekly, 67% at least monthly)
- Running records (35% at least weekly, 61% at least monthly)
- Journals (27% at least, 57% at least monthly)

The other evidence sources and the extent that they were used at least once were:

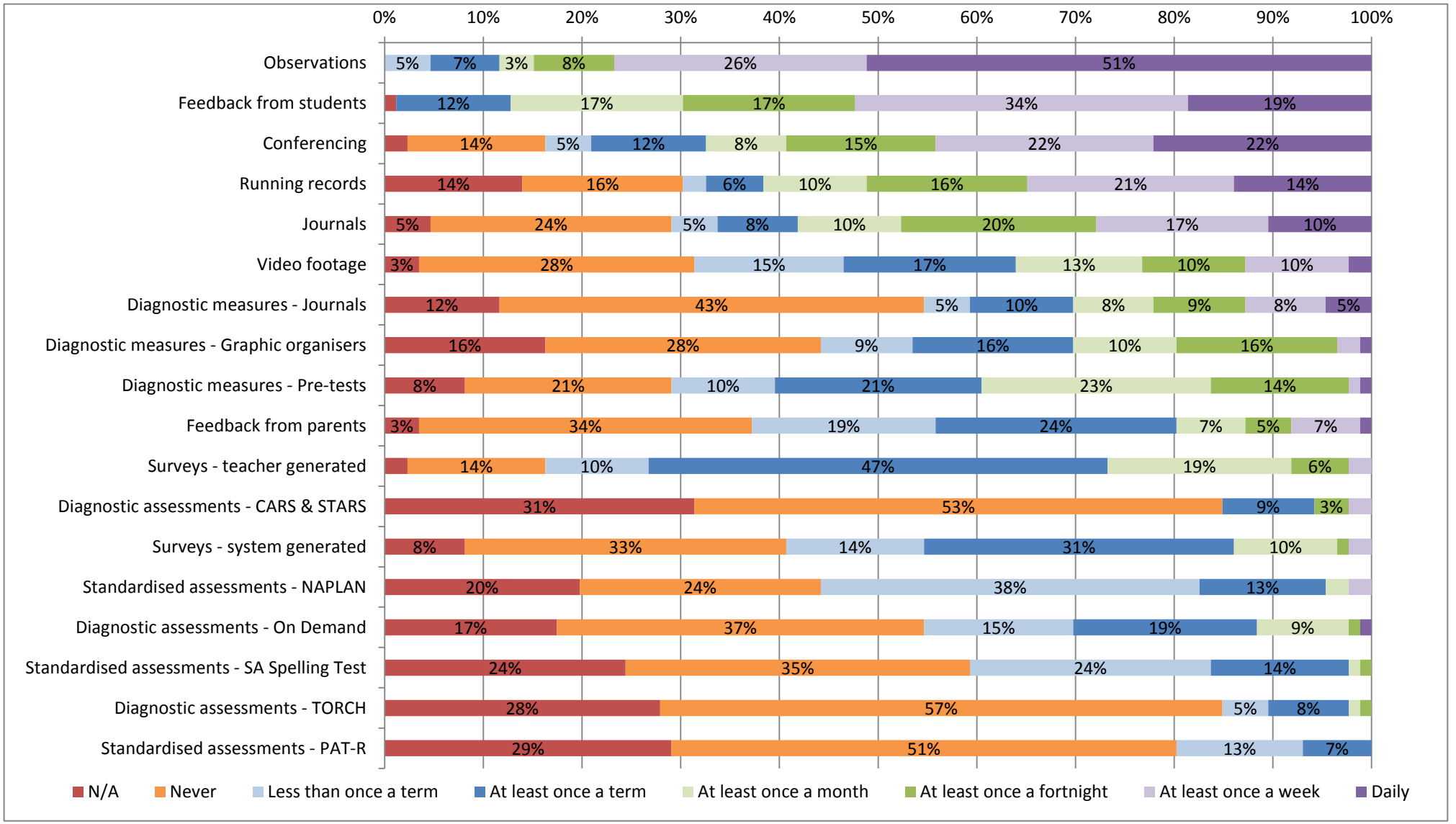
- Teacher generated surveys (84%)
- Pre-tests (70%)
- Video footage (67%)
- Feedback from parents (63%)
- System generated surveys (58%)
- NAPLAN (55%)
- Graphic organisers (54%)
- On Demand (45%)
- Journals (45%).

The initial applications for TPL asked teachers to cite the sources of evidence they had used to identify their student needs. The most common sources of evidence cited in the applications were:

- Feedback from students (88%)
- Observations (88%)
- On Demand (88%)
- NAPLAN (73%)
- Conferencing (70%)
- Feedback from parents (57%)

[7] Please note the list of evidence sources is based on a similar question asked in the TPL applications.

Figure 23: **In relation to identifying *student* needs and *student* outcomes during your TPL inquiry, how often did you use the following evidence sources?**



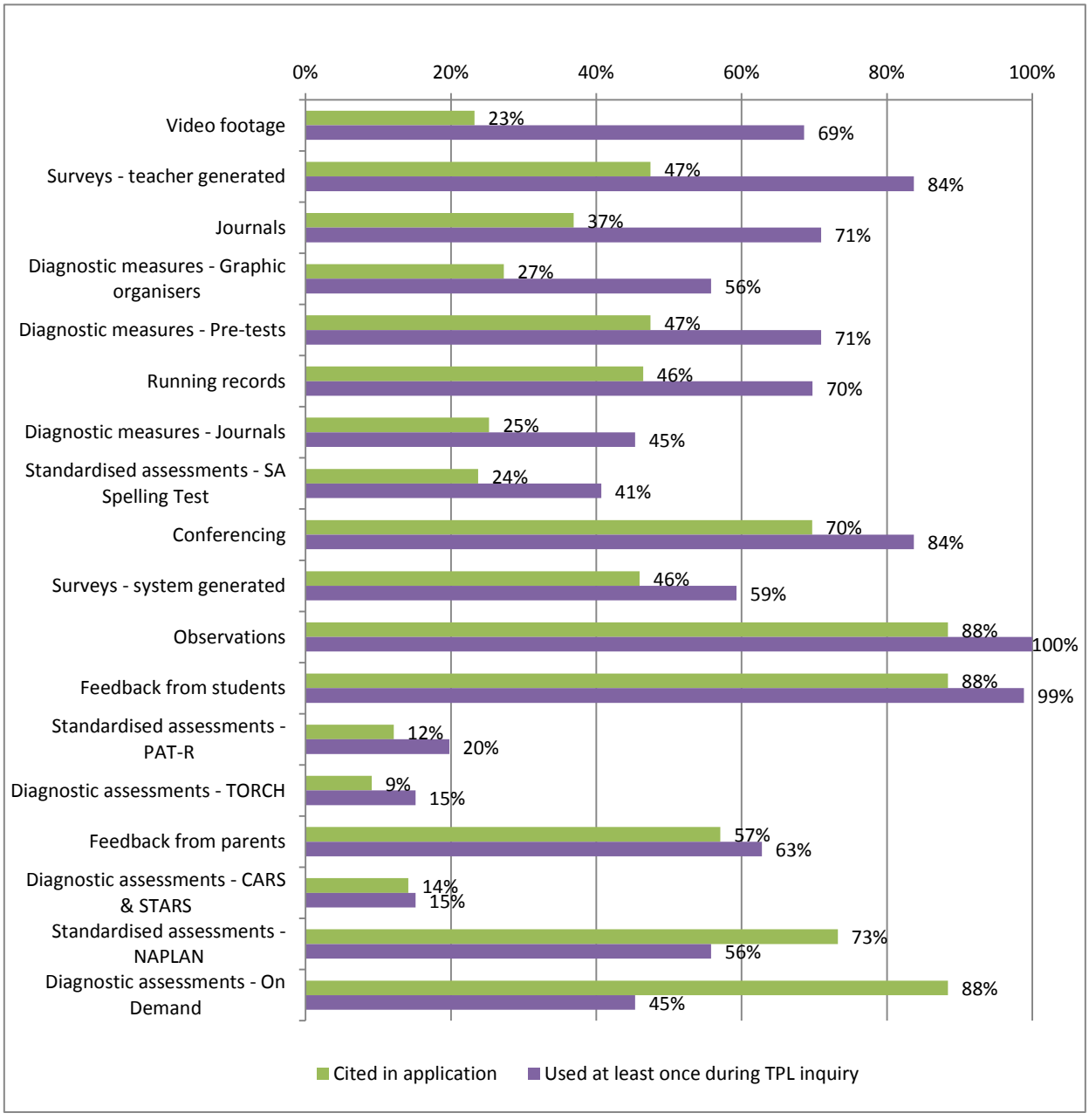
When comparing the sources cited at the time of application and those used during the TPL inquiry, as shown in Figure 24, the largest increases were similar to those for measuring teacher needs. They included:

- Video footage (23% cited it in their application compared to 62% who indicated they had used it by the end of their TPL inquiry)
- Teacher generated surveys (47% compared to 84%).
- Journals (37% compared to 71%).

Graphic organisers and pre-tests were also substantially used more during TPL than were cited at the time of application.

Two sources were used less than cited in the application; NAPLAN and On Demand.

Figure 24: **Comparison of student-focused evidence sources cited in applications versus sources indicated as used at least once during the TPL inquiry (application data n=198, second survey n=87) (ordered by largest difference)**



Measuring changes in the wider school community

Using evidence to measure change in the wider school community was not a focus of any case study. While eight case studies (67%) had aims to influence the whole school, this was not their primary focus. Furthermore, while many case studies described hopes that their inquiry would influence whole-school indicators such as NAPLAN, VCE, or Attitudes to Schools surveys, they saw measuring this as a responsibility of the school instead of individual teachers. Some also noted the challenges of measuring whole-school impact, with the many other influences that affect such large-scale and long-term outcomes.

Some case studies had more targeted aims of affecting certain teachers, year levels, or subject areas. The extent to which these were measured is described in the previous categories of measuring changes in teaching practice and student outcomes.

Developed knowledge and skills for collecting and using evidence

All case studies were using multiple forms of evidence to inform their inquiry, including collecting and using evidence from their classrooms. Many described that some of their substantial learnings from TPL had been about collecting and using evidence to inform their teaching. This reflected responses in the survey when teachers were asked to describe what had changed in their practice across the whole of TPL, the second-most common theme related to the improved use of evidence (18% of respondents, described in more detail under Figure 28). Also, when comparing the first and second survey responses for teachers' self assessment of their abilities, using, collecting, and analysing evidence were all among the responses showing the most improvement across a range of measures (as shown in Figure 29).

> **This TPL teacher was focused on developing literacy skills amongst students. The collection of evidence had been a significant factor in her TPL journey. She profiled her own Year 1 class as the relevant evidence group. The evidence she collected concerned both student attitudes and outcomes. Information about student self belief was collected through student self assessments and reflections and through conferencing, quizzes, and questionnaires. Learning outcomes were being measured through Fountas and Pinnell's Benchmark Assessment System (which identifies gaps in student comprehension and reading), conferencing, and data from strategy groupings. The conferencing process included worksheets onto which students could record learning goals, while it also facilitated student self assessment and reflection. She noted that the assessment tools had led to more in-depth and professional discussions between teachers and students about learning progress. *"I link teacher observation, diagnostic testing, and student self reflection in a triad to give me a picture and a better understanding of where that child truly is in their learning, in order to be able to inform my teaching and reporting. I've probably never done something [quite that sophisticated] in my teaching life."***
>
> ***S*he also found the 'Three Strands of Student Learning' a useful tool for profiling students' abilities and identifying their learning needs, however it wasn't until participation in the TPL workshop days that she developed a better understanding of the tool's implications.**
>
> **This teacher was profoundly moved by the change in her own knowledge and practice, brought about by self reflection. She explained that professional learning had given her a better understanding of the role and interpretation of data and the ways in which she could then scaffold learning. Understanding data had assisted her in building a professional toolkit and had assisted in focusing her research efforts in order to support student needs. She was now personalising learning for students, using strategies that**

would take them from one step to the next. ***"Before I was providing them with opportunity – now I'm providing them with real understanding of themselves as literacy learners."*** **(Case study extract)**

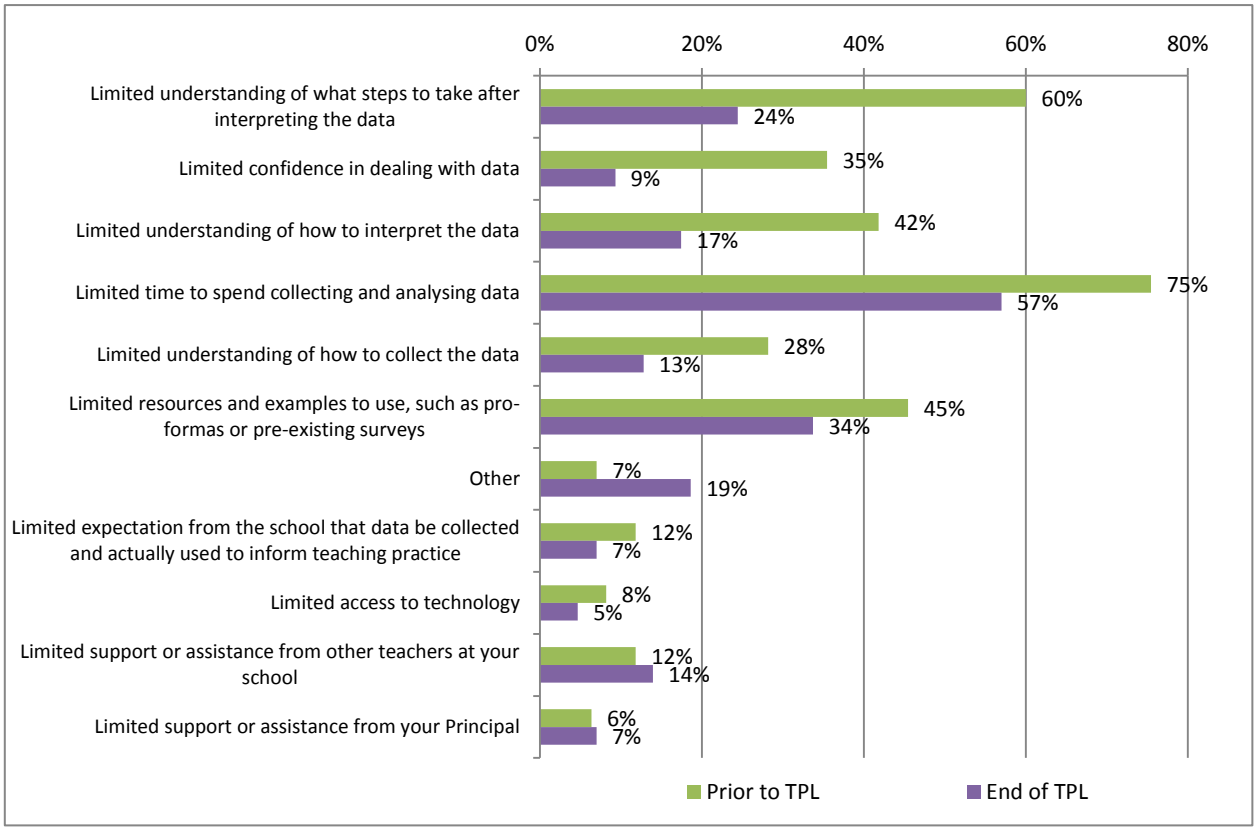
Teachers were asked in the first and second surveys about the obstacles they face when using data to inform their practice, as shown in Figure 25. By the end of TPL teachers reported substantially fewer obstacles to using data to inform their practice than prior to TPL. The largest improvements occurred for:

- Limited understanding of what steps to take after interpreting the data (falling from 60% of respondents in the first survey to 24% of respondents in the second survey)
- Limited confidence in dealing with data (35% to 9%)
- Limited understanding of how to interpret the data (42% to 17%).

The largest obstacle that remained for teachers by the end of their TPL was limited time to spend collecting and analysing the data (originally 75% but still at 57% by the end of TPL). In the case studies teachers indicated that they were going to continue using their improved evidence practices in 2014. At the same time, these teachers indicated that they would focus on making their evidence practices more efficient, having trialled different practices and developed specific resources. Some were still concerned about how they would undertake the increased evidence collection and analysis once they did not have their TPL time.

The second most prominent obstacle that remained was limited resources and examples to use, such as proformas or pre-existing surveys (originally 45% but still at 34% by the end of TPL).

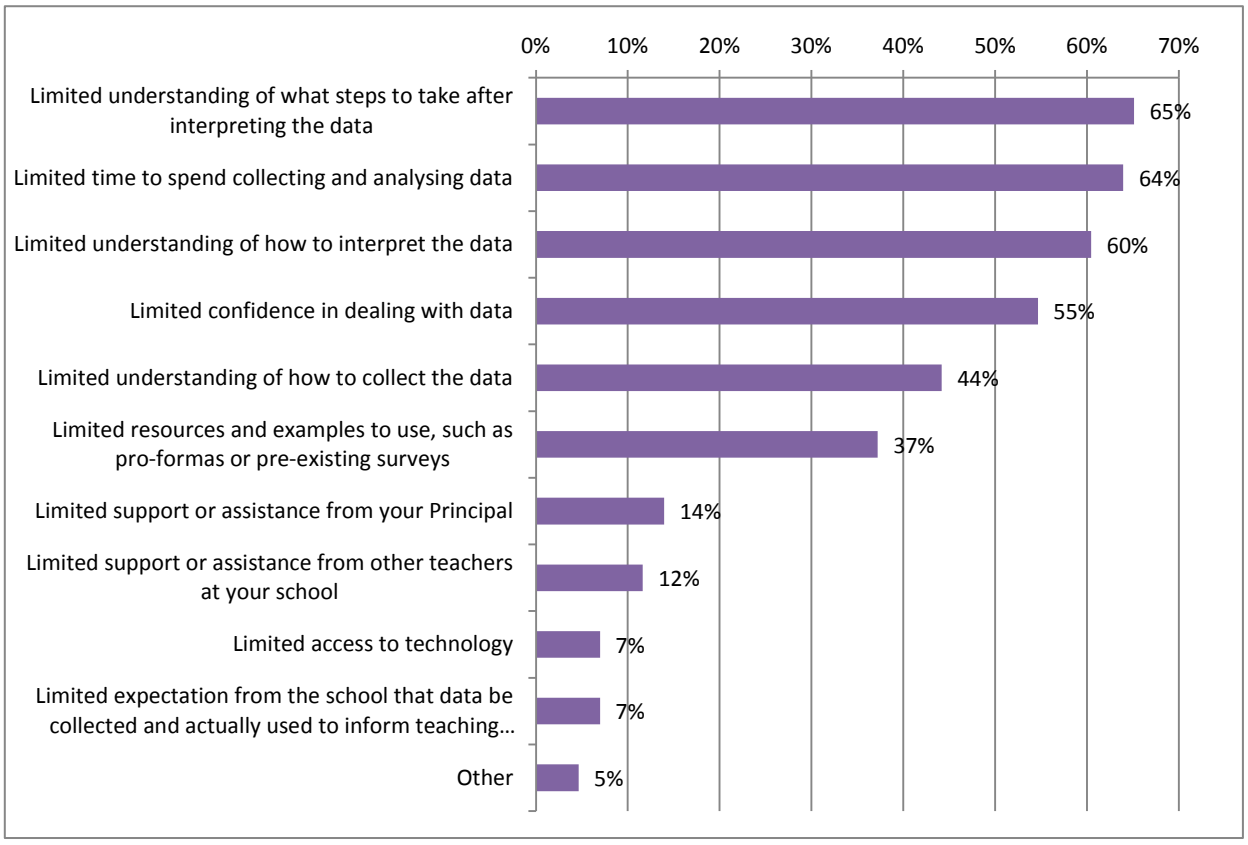
Figure 25: **What do you feel are the obstacles you face when using data to inform your practice? (select all that apply) (first and second survey comparison, n=110 and n=87 respectively, in order from largest to smallest difference)**



The 15 responses that provided descriptions under 'other' were varied but included difficulties in collecting meaningful data; a desire for more time release or support from school leadership; and the challenges faced by subject areas other than literacy and numeracy.

In the second survey, teachers were also asked what obstacles other teachers in their school face when using data to inform their practice, as shown in Figure 26. This showed that many think the same obstacles that they faced prior to TPL now continue to face other teachers. Limited understanding of what steps to take after interpreting data, how to interpret the data, and how to collect the data, as well as overall confidence in dealing with data, were all perceived as key obstacles. This was in addition to time and pre-existing resources, which remained to be obstacles for many TPL teachers at the end of their TPL inquiry.

Figure 26: **Now, what do you feel are the obstacles other teachers in your school face when using data to inform their practice? (select all that apply) (ordered from most to least)**



The 6 responses that provided descriptions under 'other' included similar responses to the previous graph, although one respondent added that some teachers are simply 'set in their ways, not willing to analyse, improve [and] change their pedagogy'.

Changes in teacher skill and practice

In the case studies teachers described in detail the changes they had made to their practice and the new knowledge and skills they had gained through their TPL inquiry. Many teachers praised the structure of TPL that gave them time to research, trial and implement changes, reflect, and then continue and adapt their research. Many teachers found their time during TPL a transformative experience in their careers to dramatically reassess and improve their teaching practice based on evidence.

In an analysis of the case studies based on assessing the extent of improvements across categories of teacher outcomes, strong improvements were cited across all categories:

- Teacher discipline/content knowledge
- Teacher practice/pedagogy
- Teacher attitudes and/or beliefs.

Teacher discipline/content knowledge

In ten case studies (83%) teachers achieved demonstrable improvements in teacher discipline/content knowledge. Five of these case studies (42%) had teachers showing strong improvements. This was particularly for primary school teachers inquiring into a specific content area; four of these case studies were in primary schools inquiring into literacy. Primary school teachers noted they appreciated an opportunity to learn in-depth about primary years literacy theory and practice, including a stronger understanding of the various forms of literacy (i.e. comprehension, spelling, etc) and how they relate to developmental learning, including identifying individual student needs with these various forms of literacy, and the theory and evidence-based strategies behind setting up differentiated learning in response to those needs. Some teachers reported that once they mapped the student needs, they needed to learn more about the developmental stages below and above the year level they teach (such as a Year 3 teacher realising she needed to learn about Prep literacy practices to respond to the needs of some of her students).

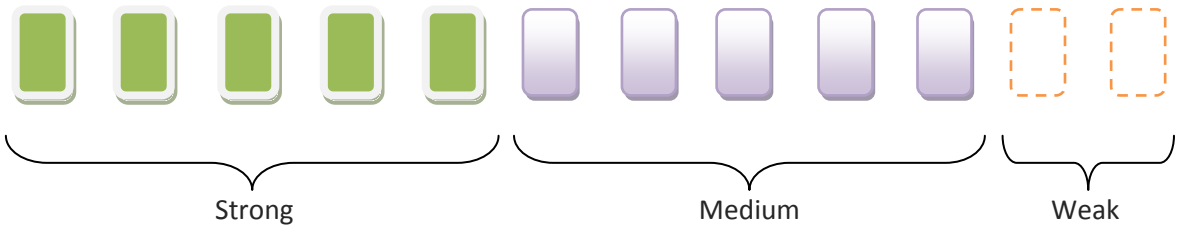
> ***"I now realise how bad I was at teaching comprehension … it's a bit sad it takes 25 years to know what you are doing."*** **(Case study extract)**

Other teachers undertook broad-ranging research into a discipline/content area, including reviewing multiple strategies and how they would apply in their classroom.

> **The TPL teacher focused on improving students' reading by researching the views of four experts in the field supplemented by extensive web-based research. As part of TPL the teacher assembled an online dossier of all the reading strategies available including how they were applied in the classroom. The next step involved visits to four schools to learn from their approaches to reading. Based on all of the above, five specific strategies were identified for application in the classroom and trialled by the teacher. The teacher also started using several literacy-focused evidence sources including On Demand data, Lexile reading tests and a 'running record', which all showed marked student improvements term by term. (Case study extract)**

The other five case studies (42%) had moderate improvements in teacher discipline/content knowledge. These were mostly in secondary schools by teachers who were already highly experienced and/or specialised in a subject area, inquiring primarily into changing teaching practice or resource/unit development. These case studies still often described some new learning about their area of inquiry regarding content/discipline knowledge. The remaining two case studies (17%) were focused on improving pedagogy and were already highly knowledgeable in the content area.

Figure 27: **Extent of case study teachers' improvements in discipline/content knowledge**



The remaining categories of improvements in teacher practice and attitudes and beliefs were stronger than improvements in discipline/content knowledge, mainly due to the nature of the inquiries and the fact that many teachers were already highly knowledgeable in the content area.

As shown in Figure 29, teachers also indicated they had improved their understanding during TPL of the Evidence Based Professional Learning Cycle, and the e[5] Instructional Model.

Teacher practice/pedagogy

Teachers in all case studies achieved demonstrable improvements in their teacher practice and pedagogy. Nine of these case studies (75%) had teachers showing strong improvements. Many teachers were focused on the teacher practices required to provide differentiated learning.

> **The goal of the TPL science teacher was to increase engagement and improve skills in the area of science prac report writing. She planned to unpack the process of prac writing using scaffolding techniques in order to build independence. She was also keen to cultivate further independence and impact upon engagement by having the students select a topic of their choice for scientific investigation. *"Student voice and choice. It was a whole student-directed project … that I'd never done before, giving up control."***
>
> **The science teacher commenced her collection of evidence by assigning students a prac writing task in order to measure their skills and identify where the challenges and gaps were in their approaches. She was using a rubric to compare and contrast changes. She spoke of an increased understanding of the relationship between evidence gathering and teaching. *"I would barely look at [pre-tests] before. It would be, 'They didn't know anything'. I wouldn't use it again. TPL has made me not just use a written pre-test, but look at observation, not just their knowledge, but how they're learning and how to go from there."* She used this information to focus on building skills in different elements of the prac writing process, such as introduction writing. Through posing relevant questions to students, she was able to guide their understanding of the purpose and structure of each reporting element. She also provided students with examples of pracs to build their critical understanding of strong and poor writing.**
>
> **Just as the science teacher had hoped and anticipated, her changed practice had led to outcomes of independence, clarity and engagement amongst the students. In the focus group the students said: *"We were more independent in what we were doing"* and *"You can show your maturity level to get the prac done on time."* One of the most powerful comments from a student was that the teacher's practice had changed in response to a better understanding of the students. "*I think she understands us more. She adapted to our way of learning."* Some students had had the same science teacher the previous year and noted how much they appreciated her new ways of teaching. (Case study extract)**

Developing knowledge and skills to provide student self-directed learning, inquiry-based learning, and undertake collaborative teaching practices also resulted in prominent changes in teacher practice among the case studies. Other changes in practice included being more explicit, higher order questioning, and facilitating better quality discussions amongst the students. As teachers achieved improvements in their discipline/content knowledge, they needed to also explore what it meant for their teaching practice.

> **This teacher was very reflective about the skills she had picked up through the process of TPL itself and the new skills she had learned in maths pedagogy. Clarifying and refining the work for her TPL had taught her the importance of flexibility and responsiveness in research. She spoke about the growth in and new depth of her maths teaching knowledge. *"The biggest [change] I suppose is my depth of knowledge in relation to the Big Ideas in Numbers. I'm a lot clearer about what that looks like…"* She also described**

her gradual realisation about the importance of individualised goal setting in the maths classroom. "*I emphasise, 'Don't give me the answer. Tell me how you got your answer'. … The students can then become the masters of their own learning.*"

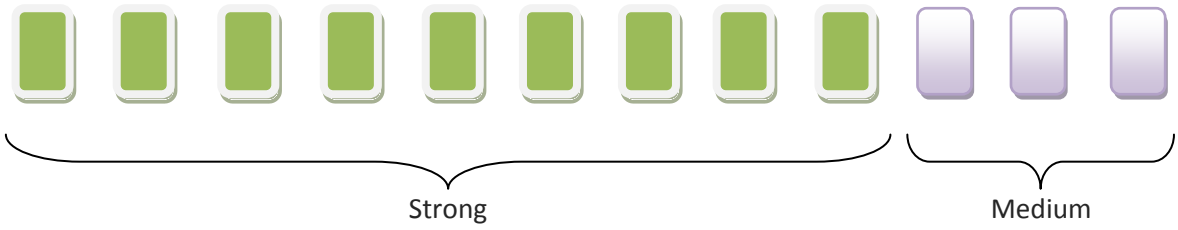
This teacher explained that she was still in the early stages of evolving the strategies. She described the process as ongoing, but spoke highly of the explicit teaching tools provided through Professor Siemon's theories and methods. The change in this teacher's outlook was significant. She considered the changes to her teaching practice as embedded. "*It's a completely new way of doing maths – I can't see me going back to the old way of teaching maths. The engagement of the students, having them work independently and giving them control over their own destiny – going backwards would be detrimental. It is an easier way to teach maths because it is so structured and the students respond so well to it.*" (Case study extract)

Collecting and using evidence was also a key practice change, which has already been described above (see 'Developed knowledge and skills for collecting and using evidence' on page 28).

The remaining three case studies (25%) had moderate changes to pedagogy. These described changes in practice although primarily related to another purpose: one was focused on developing resources to aid with individualised student assessment and feedback through rubrics; another was focused on using technology to better suit students' needs; and the final one was still in the early stages of their inquiry due to delays, but had started making changes in their practice to provide more differentiated learning.

***"I've also changed how I present the work – so there are multiple entry and exit points for the students in a given topic."* (Case study extract)**

Figure 28: **Extent of case study teachers' improvements in practice/pedagogy**



In the second survey, teachers were asked to describe what they changed in their practice in respond to the identified student needs. The most common themes were:

- Being more explicit with their teaching strategies, including making the students more aware of their learning (23%)

***In response to student needs, my practice became much more explicit … visual resources and proformas used for the approach used a more accessible language for younger learners. The process itself was more supported and allowed for a gradual release of responsibility … There was also an increased amount of preparation involved to equip students with the skills needed to participate and do well …* (Survey response)**

- Collecting and using more evidence to guide learning and identifying student abilities and needs, including linking with improved assessment and reporting practices (18%)

> ***What changed for me was my evidence collecting procedures, the teaching strategies around critical literacy in classrooms and how to report findings to different stakeholders. … Planning units of work that embedded the learning … [and were] flexible enough to cater to the different learning journeys of each child was also a huge shift in both thinking, planning and teaching …*** **(Survey response)**

- Encouraging students to be more independent learners, including student-directed learning and 'flipped classrooms' (17%)

> ***My practice changes from majority teacher focused to more student-led learning. Students were able to select what they needed to learn to move on and were able to highlight what they already knew.*** **(Survey response)**

- Providing differentiated learning, to better meet individual student needs, including through better student profiling and team teaching approaches (16%)

> ***I am now very aware of the specific type of comprehension that a child is having difficulties with and am able to hone in on this and work with them on this … before I did TPL, I was aware of children needing to comprehend and how important this was but didn't know what specific comprehension they needed to work on.*** **(Survey response)**

- Using technology more or better, particularly iPads (11%)

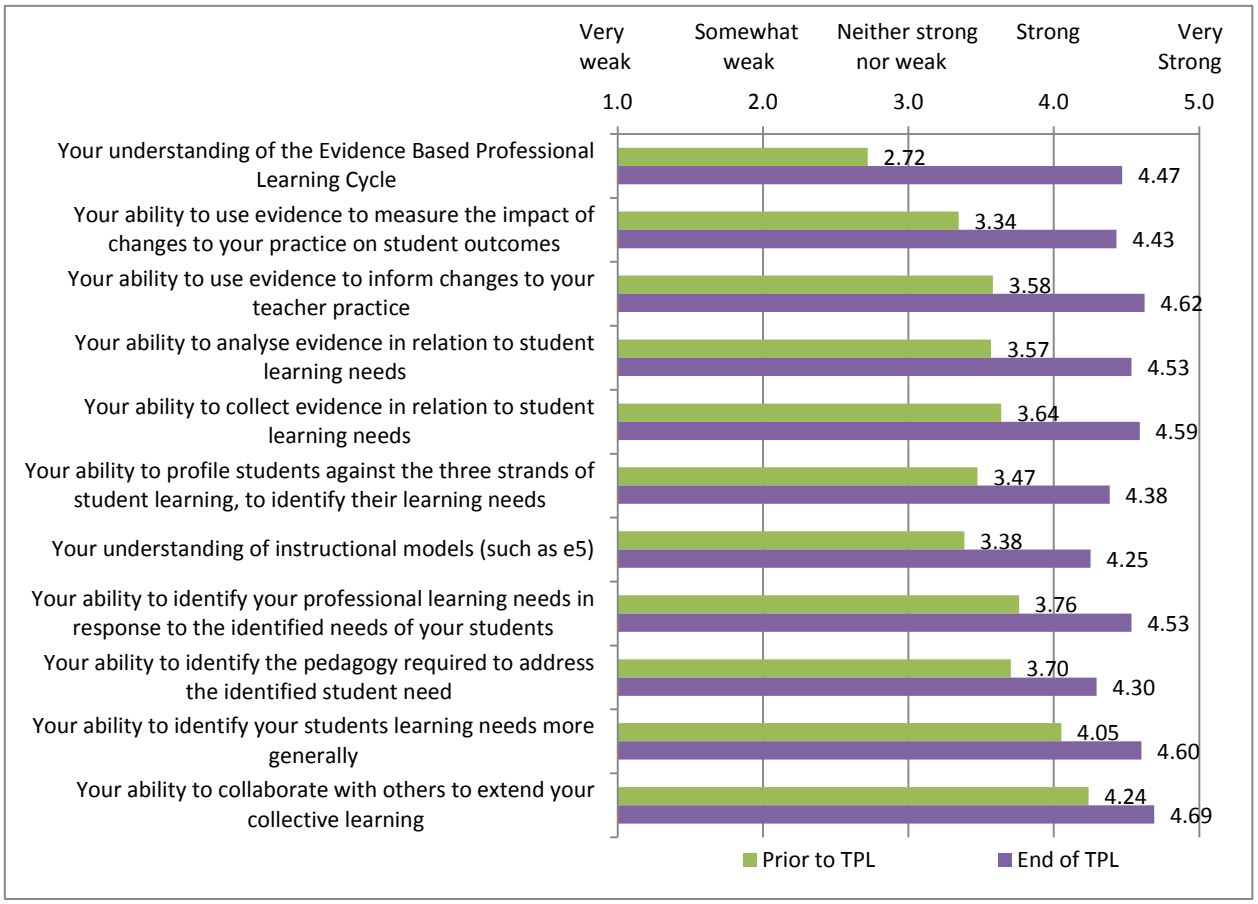
> ***The use of iPads in the classroom.*** **(Survey response)**

- Improving class structure or general delivery, including breaking tasks down to be more step-by-step (10%).

> ***Changes to lesson structure – working with small group intervention as part of my time.*** **(Survey response)**

Teachers were asked in both the first and second surveys to self-assess their abilities across a number of measures, as shown in Figure 29. Improvements across all measures can be seen, with substantially more teachers rating themselves as 'very strong' by the end of TPL.

Figure 29: **How would rate yourself in relation to the following abilities/understandings? (first and second survey comparison, n=118 and n=90 respectively, in order from largest to smallest difference)**



Prior to TPL the key strengths were abilities to collaborate, identify student needs generally, identify professional learning needs, identify appropriate pedagogy and collect evidence in relation to student needs. The lowest responses related to understandings of the Evidence Based Professional Learning Cycle and the e[5] Instructional Model. By the end of TPL the key strengths were:

- Ability to collaborate with others to extend collective learning (74% very strong)
- Using evidence to inform changes in teacher practice (65% very strong)
- Collecting evidence in relation to student learning needs (63% very strong)
- Identifying student learning needs more generally (62% very strong).

Tests of effect sizes (based on comparison of the averages of the first and second survey, divided by the standard deviations of each response category) show that these abilities and understandings advanced between 0.6 and 1.5. Hattie describes effect sizes above 0.4 as being above average outcomes for professional learning in education.[8] The largest improvements during TPL related to the understanding of the Evidence Based Professional Learning Cycle (effect size of 1.5), and abilities to:

- Use evidence to inform changes to teacher practice (effect size of 1.2)
- Use evidence to measure the impact of changes to your practice on students outcomes (1.2)

[8] Hattie (2009)

- Collect (1.0) and analyse (1.0) evidence in relation to student learning needs, as well as profile students against the three strands[9] of student learning (0.9) and identify student learning needs more generally (0.8)
- Identify professional learning needs (1.0) and the pedagogy required (0.7) to address/respond to the identified student learning needs.

The understanding of the e[5] Instructional Model also advanced by 0.9. Ability to collaborate to extend collective learning, which was already comparatively strong, advanced by 0.6.

As shown in Figure 30 on the following page, teachers were asked the frequency that they undertook certain key activities that TPL was aiming to encourage teachers to undertake during their inquiry. Teachers were asked how often they undertook the activities prior to TPL in the first survey, and how often they had undertaken the activities during their TPL inquiry in the second survey. Of the activities asked about, the most common activities were the following (each of which had at least half of respondents undertaking them at least once a fortnight during their inquiry):

- Discuss and share professional knowledge with other staff (14% daily and cumulatively 60% weekly and 86% fortnightly)
- Trial new techniques and strategies within the classroom/s in response to identified student needs (11% daily and cumulatively 51% weekly and 77% fortnightly)
- Respond to evidence on your students to make changes to your teaching practice (13% daily and cumulatively 44% weekly and 68% fortnightly)
- Collect evidence about your students' abilities, knowledge and attitudes (14% daily and cumulatively 41% weekly and 56% fortnightly).

Most of the key activities asked about were undertaken significantly more often during TPL, than prior to TPL.[10] These included:

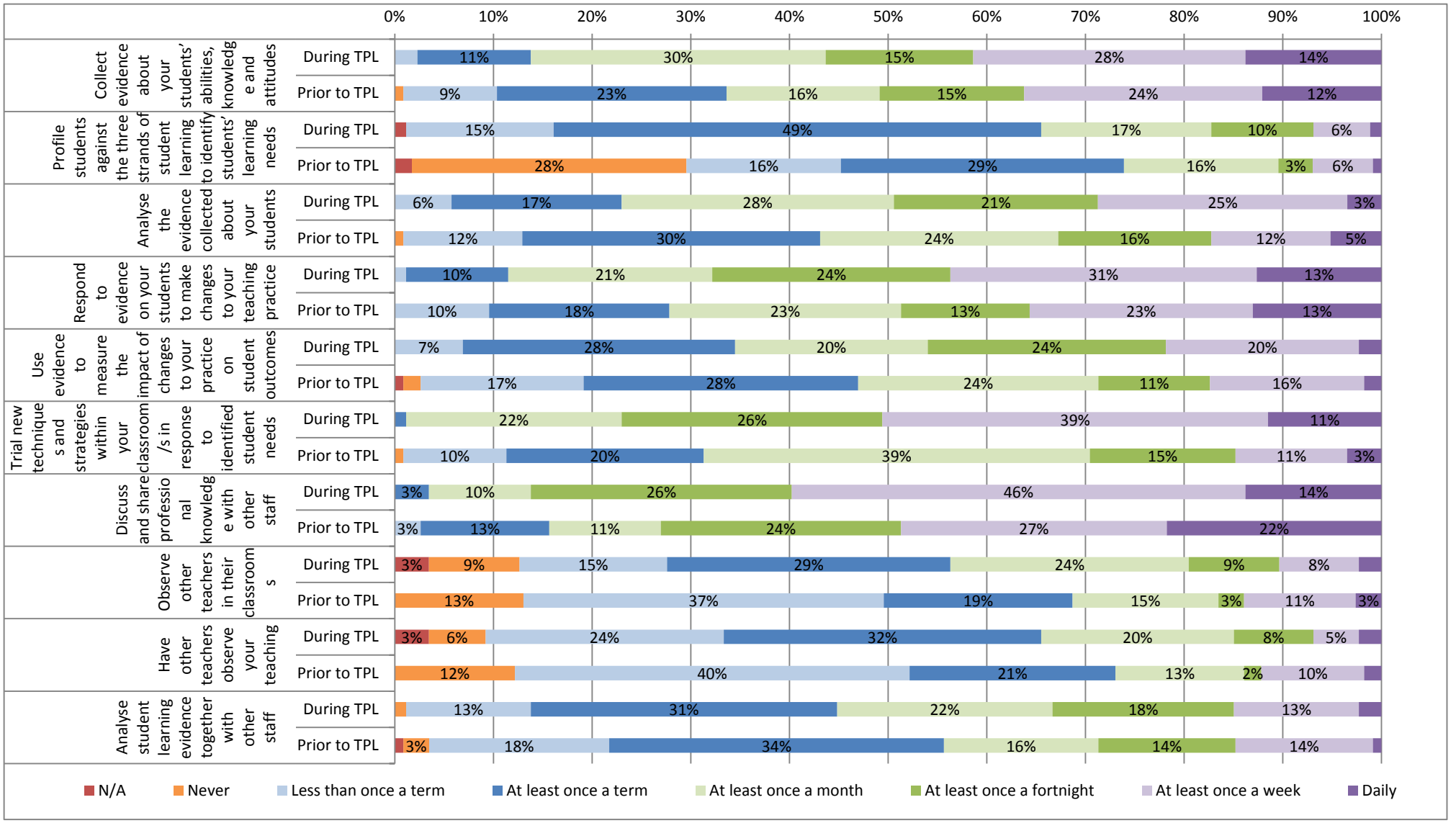
- Collect evidence about students' abilities, knowledge, and attitudes
- Profile students against the three strands of student learning to identify students' learning needs
- Respond to evidence on your students to make changes to your teaching practice
- Trial new techniques and strategies within the classroom/s in response to identified student needs
- Discuss and share professional knowledge with other staff
- Observe other teachers in their classrooms
- Have other teachers observe your teaching.

The remaining activities did not significantly increase in frequency, but showed some increases in average frequency. All of these activities related to using or analysing evidence:

- Analyse the evidence collected about your students
- Use evidence to measure the impact of changes on your practice on student outcomes
- Analyse student learning evidence together with other staff.

[9] The three strands of student learning were based on a student profiling activity provided at the Induction and Support Program Days. The three strands were know, be and do.
[10] Statistical significance based on a Chi-Square test.

Figure 30: **Frequency of activities (How often did you do the following?)**



In terms of embedding the changes of practice that had been developed during TPL, eleven case studies (92%) had plans to do so in 2014 by the time of our site visit in Term 4 of 2013. Nine of these case studies had clear or concrete plans.

> **By November, the TPL team had already conducted a session to look at how their strategies fitted with the AusVELS and had scoped its sequence for the following year. The team also took pride in presenting the outcome of its work to fellow regional participants on the final workshop day. (Case study extract)**

For many teachers they planned to embed their improved use of evidence in 2014. Some talked about having to find more time efficient ways to collect and analyse the evidence, although they commented it would be easier now that they had developed and trialled tools, and practised reflecting upon and responding to the findings with other teachers.

> **The teachers expressed a strong intention to continue with the various forms of evidence gathering they had already been conducting. They run student Pride Nights (where students take home strategies to share with parents), and plan to continue their use of readers' notebooks and reflections, online testing, Probe testing, English online, and Fountas and Pinnell. (Case study extract)**

It appeared that for most case studies the focus of their TPL on developing changes in their individual teaching practice meant the ability to embed the changes were largely within their control, and not contingent on school approval or changes to school structures or timetabling. However, some required changes within the school to embed their changes, and most required changes within the school to extend the learning into next year with more colleagues.

> **The teachers planned to continue and embed the changed Café and Daily 5 approach in 2014, as well as start to extend the approach to other learning areas in their classroom beyond literacy. One teacher was moving to another year level, and they hoped that this will also assist to develop the approach more deeply across the school. The teachers were also now starting to share their findings with other schools in their region. (Case study)**

Teacher attitudes and beliefs

Teacher attitudes, dispositions, and beliefs towards teaching, including their confidence and motivation to trial new teaching techniques and strategies based on student evidence, significantly improved across the cohort of TPL teachers in the case studies and the surveys.

All case studies reported improvements in their attitudes, dispositions or beliefs towards teaching. Eleven of these case studies (92%) were considered to be strong improvements. For some, TPL was a transformative experience for their teaching career. This included some teachers later in their careers describing how TPL had re-energised them about what was possible for the students through undertaking professional learning and changing their teaching practice.

> **The impact of the TPL and the new approach to teaching literacy for the teachers was quite profound: *"[TPL has been] the best PD I've had in my whole teaching career. You go off to PD [previously] and you get all inspired and come back but you don't have time to implement it – you just fall back into old habits. Whereas this gives you time to reflect and change habits."* (Case study extract)**

Some teachers earlier in their career also described TPL as a transformative experience, noting that TPL had shifted their self-perceptions about teaching, and had provided them with opportunities to lead initiatives within their school – thus also shifting perceptions.

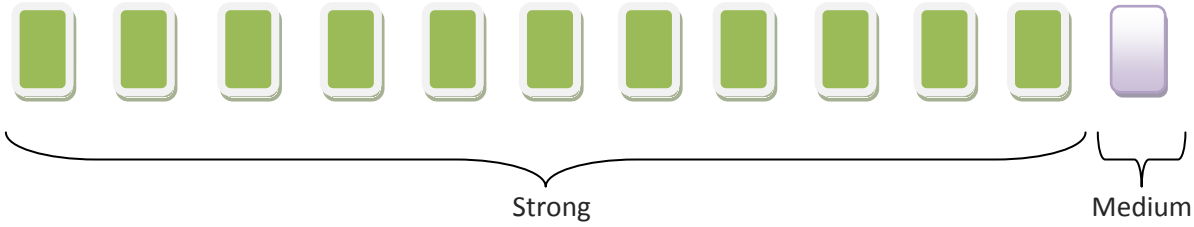
> **All in all the teachers found TPL a wonderful experience which gave them new insights and a fresh perspective on teaching, as well as confidence in their abilities as teachers and leaders. (Case study extract)**

Some teachers also described changed attitudes and beliefs about their area of inquiry (i.e. literacy, numeracy or ICT), improving their confidence in the area but also their belief in its importance for students.

> **The TPL teachers felt that, by using iBook author technology and developing and using "How to be a Scientist" in their own classrooms, their practice had changed. It allowed them to teach science concepts in a more hands on way and was changing how they used software. They also said that it had increased their confidence in using the iBook technology. They had learnt new skills through being able to work together collaboratively. As well as learning about the iBook they had increased their understanding of the power of technology, and how they can use it. Through seeing the way their students' engaged with "How to be a Scientist", they could see the usefulness of the iBook technology as a teaching resource. Teachers felt that now they had the skills it would not be a huge task to create books which would be resources they could use in their teaching to engage their students and meet their specific learning needs. They would be able to fit this into their normal planning time. (Case study extract)**

The remaining one case study that was categorised as having medium improvements in teacher attitudes, dispositions or beliefs had two participants and while one appeared to have experienced substantial improvements, the other did not. It appeared this was mainly due to their lower level of commitment and engagement with their inquiry.

Figure 31: **Extent of case study teachers' improvements in attitudes, dispositions or beliefs**



In the surveys, there were also significant improvements in confidence and motivation across every measure asked about, as shown in Figures 32 and 33 below.[11]

Figure 32 describes changes in teacher confidence. By the end of TPL over four in five respondents were 'very confident' to:

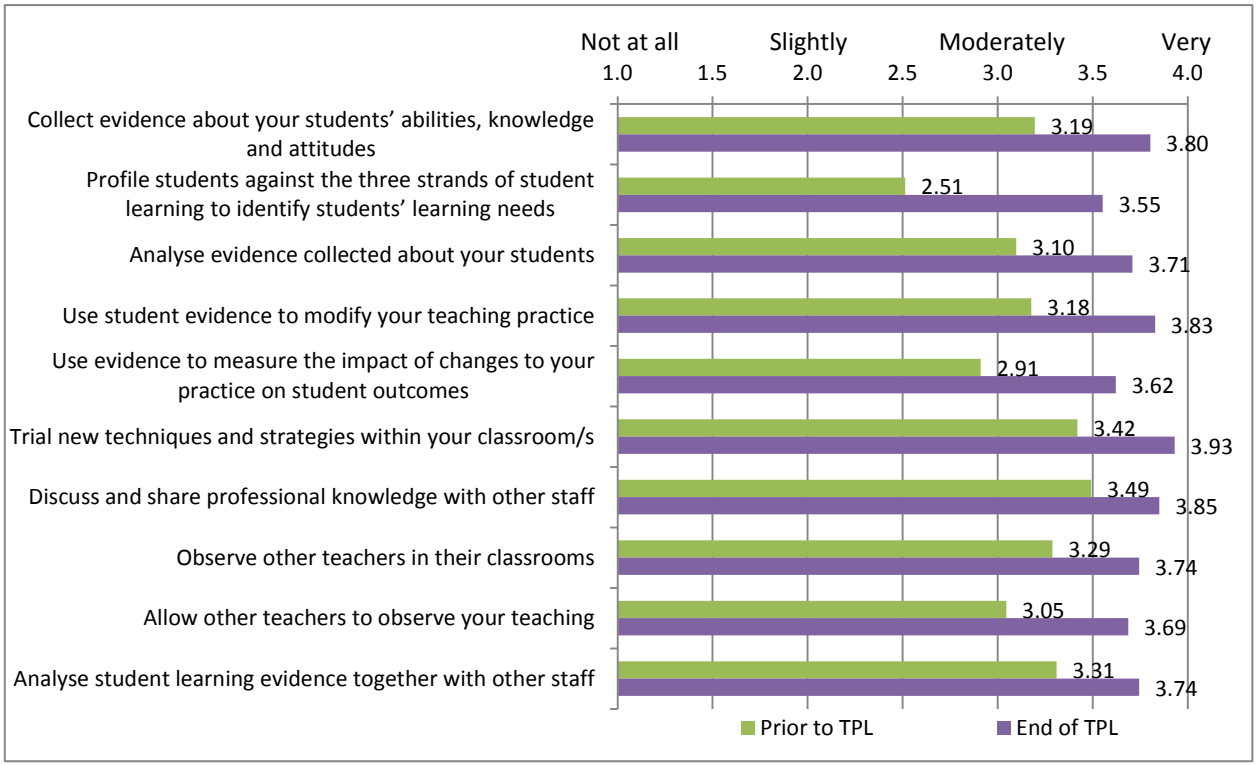
- Trial new techniques and strategies within their classroom (94% of respondents, compared to 51% prior to TPL)

[11] Statistical significance based on a Chi-Square test. In this case, comparing responses from the first survey that asked about confidence and motivation before undertaking TPL, and the second survey that asked about confidence and motivation by the time of the second survey in Term 4 (i.e. near the end of the TPL inquiry).

- Discuss and share professional knowledge with other staff (86% compared to 58% prior)
- Use student evidence to modify their teaching practice (84% compared to 31% prior)
- Collect evidence about their students' abilities, knowledge, and attitudes (80% compared to 35% prior).

The largest improvements in confidence were in profiling students against the three strands of student learning, using evidence to measure the impact of changes in their practice on student outcomes, using student evidence to modify their teaching practice, and allowing other teachers to observe their practice.

Figure 32: **Before undertaking TPL / Now, how confident are you to… (first and second survey comparison, n=113 and n=88 respectively)**

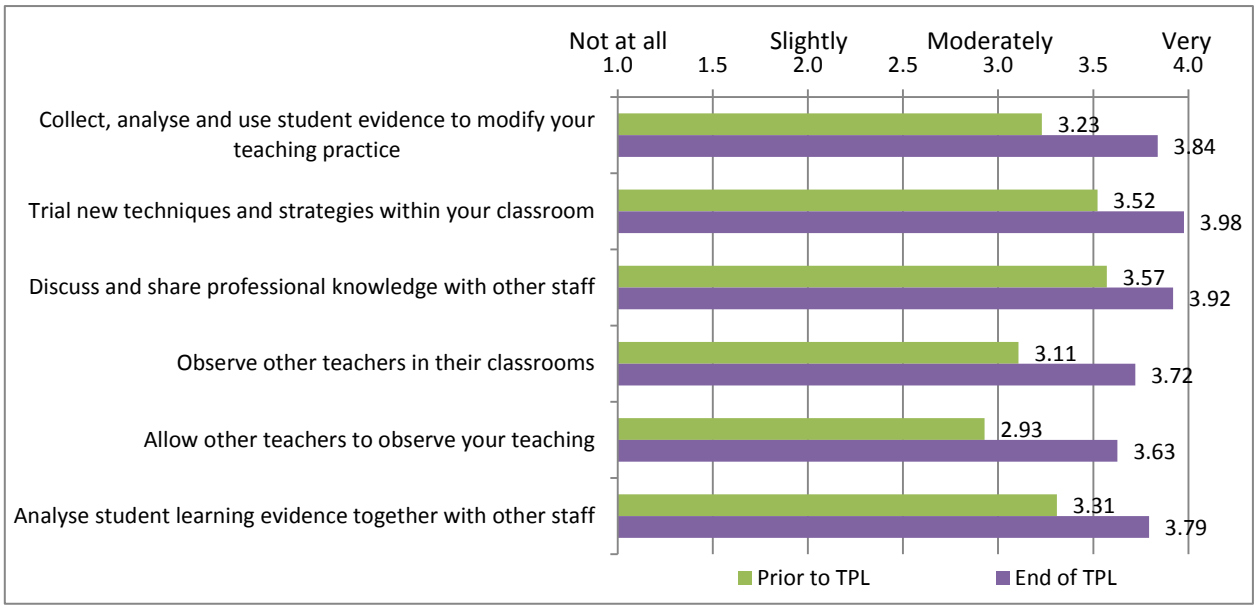


Regarding motivation, displayed in Figure 33 below, by the end of TPL over four in five respondents were 'very motivated' to:

- Trial new techniques and strategies in their classroom (98% of respondents, compared to 59% prior to TPL)
- Discuss and share professional knowledge with other staff (93% compared to 63% prior)
- Collect, analyse, and use student evidence to modify their teaching practice (85% compared to 35% prior)
- Analyse student learning evidence together with other staff (80% compared to 45% prior).

The largest improvements in motivation were in allowing other teachers to observe their teaching, observing other teachers in their classrooms, and collecting, analysing, and using student evidence to modify their teaching practice.

Figure 33: **Before undertaking TPL / Now, how motivated are you to… (first and second survey comparison, n=113 and n=88 respectively)**



Attitudes, dispositions, and beliefs towards professional learning and evidence-based inquiry also strengthened for TPL teachers across the case studies and survey responses.

Ten case studies (83%) had plans or desired to continue their professional learning in 2014, with four of these having clear plans.

> **This teacher has expressed a desire to extend her professional learning further through enrolment in a numeracy or Bastow course. (Case study extract)**

In the second survey, 86% of respondents indicated that their TPL experience had positively influenced the way they would approach professional learning in the future. Around one in ten (13%) were unsure whether it had influenced their approach, and one respondent indicated it had not (1%). Respondents were asked to explain their response. The main theme was respondents emphasising their positive experience of TPL, and the impact of it on them and their students (30%).

> ***By seeing the benefits of improved classroom practice, teaching and learning, the process of professional learning done right is extremely beneficial.*** **(Survey response)**

The next most prominent theme was time (21%), with respondents emphasising that having the time to research, implement, trial, and embed professional learning as provided through TPL was critical.

> ***Having the time to really investigate a change in practice rather than doing one off PDs makes a huge difference … Change needs time … to fully investigate and trial ways of change in your own practice [and] then make it a regular part of your practice …*** **(Survey response)**

A greater appreciation of the value of collaborative professional learning was the next key theme (16%). This included professional discussions with colleagues, seeking feedback, and peer observations.

> ***[TPL] has made me very aware of the necessity for feedback on a more regular basis and in different forms.*** **(Survey response)**

Belief in the effectiveness of the evidence-based inquiry approach to professional learning was the next key theme (13%), also described as active or action research.

> ***I will be far more inquiry minded and will link student need to my own learning so that it results in changes teaching and learning.*** **(Survey response)**

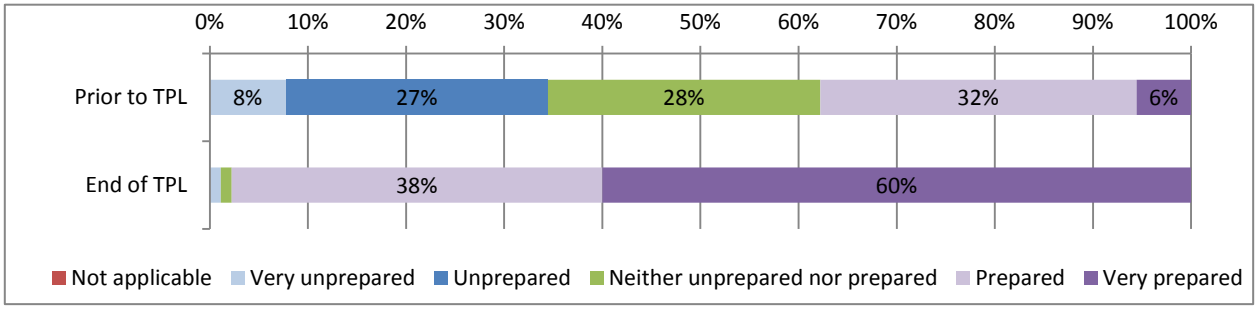
Other themes were:

- Being more enthusiastic about undertaking future professional learning because of the outcomes they had seen through their TPL (12%)
- An increased appreciation of the value of reflecting on practice (12%)
- An increased appreciation of the approach of trialling and implementing learnings (10%)
- More awareness of the possibilities of professional learning that are available, including being more open to learning new things, or not being as closed minded (10%).

Teachers were also asked in the second survey to reflect upon their preparedness and confidence for undertaking independent, evidence-based inquiry into their teaching practice at the beginning of 2013, and their preparedness and confidence to continue independent, evidence-based inquiry into their practice now that they were nearing the end of their TPL.

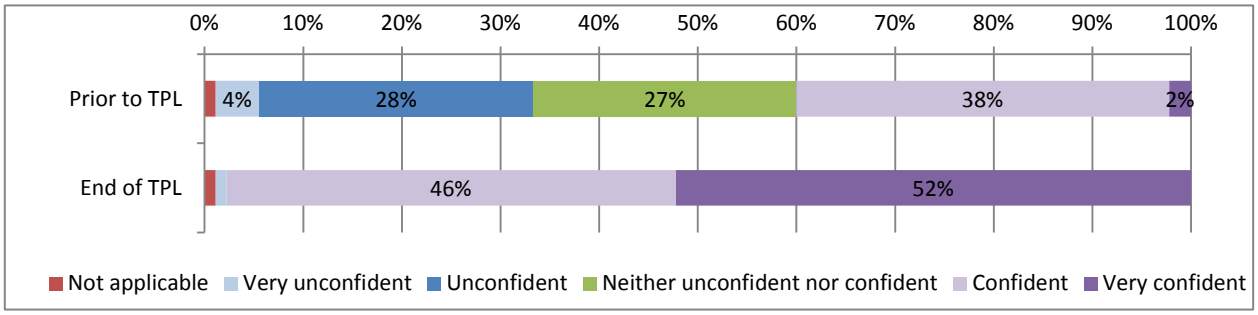
Overall across the TPL year there was a tenfold increase in the proportion of teachers feeling 'very prepared' to undertake independent, evidence-based inquiry into their teaching practice, increasing from 6% to 60% of respondents, as shown in Figure 34. By the end of TPL nearly all respondents (98%) felt prepared or very prepared to continue such inquiry into their practice.

Figure 34: **Thinking back to the beginning of 2013 / Now, how prepared are you to continue independent evidence-based inquiry into your teaching practice? (second survey n=91)**



Similarly regarding confidence to undertake such inquiry, there was 26-fold increase in the proportion of teachers feeling 'very confident', from 2% to 52%, as shown in Figure 35. By the end of TPL nearly all respondents (98%) were confident or very confident to continue such inquiry into their teaching practice.

Figure 35: **Thinking back to the beginning of 2013 / Now, how confident are you to continue independent evidence-based inquiry into your teaching practice? (second survey n=91)**



Impact on students

This section first describes the overall results, and then describes the student outcomes achieved in more detail across improvements in discipline/content knowledge, capabilities and skills, and finally attitudes and beliefs. Overall, the changes in TPL teachers' practice flowed through to improved student outcomes across a number of measures. In many cases the greater use of evidence ensured the changes were based on student needs, and thus teachers targeted, achieved and measured greater student outcomes.

Twelve student focus groups were undertaken as part of this evaluation (one for each case study). Before the focus groups it was agreed with teachers the specific changes in teacher practice that would be explored. At the beginning of the focus groups, the students were asked what their understanding of the changes were and how they had experienced these changes, before then exploring the impact on their learning. In all twelve student focus groups there was clarity among the students about the changes in teacher practice that had been made. When asked to describe these changes in more detail, all focus groups showed the students understood the various aspects of change that had been implemented in their classrooms. In many cases, students described that the practice was different to how they had experienced the class or the teacher previously. In many cases, particularly in higher year levels, the teachers had been explicit with the students about the changes they were making and that they were due to their TPL inquiry.

In all case studies students were positive about the changes that had been made. They variously described how the changes had improved their discipline/content knowledge, capabilities or skills, and/or attitudes and dispositions to learning. This is described in more detail in the below sections.

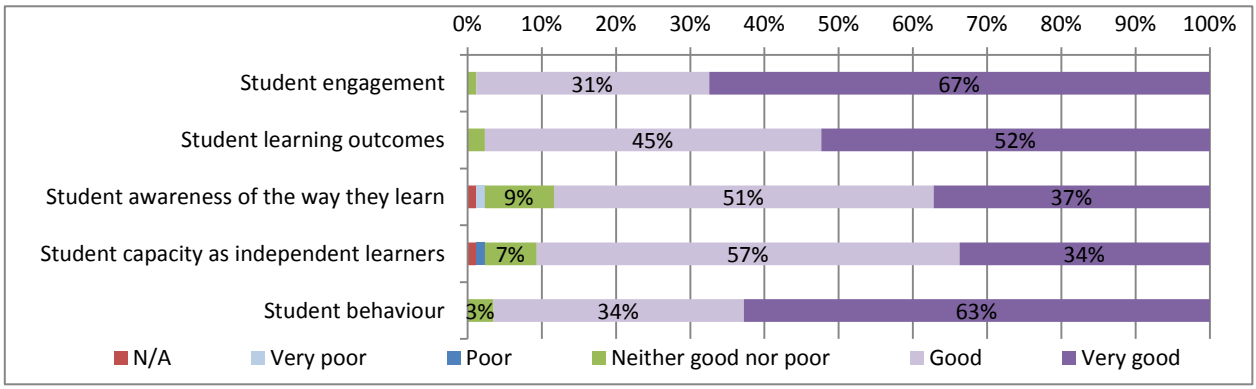
In almost all cases, the student feedback about outcomes achieved reflected the outcomes self-reported by the teachers. This reflects that many teachers had been gauging student feedback as they went, such as through their classroom observations, conversations with students, student journals, and/or more formal surveys and interviews.

As shown in Figure 36, by the end of TPL the majority of teachers were reporting 'very good' outcomes for student engagement, learning and behaviour:

- Just over two-thirds (67%) reported very good student engagement and cumulatively nearly all (98%) reported at least good student engagement
- Almost two-thirds (63%) reported very good student behaviour and cumulatively nearly all (97%) reported at least good student behaviour
- Just over half (52%) reported very good student learning outcomes and cumulatively nearly all (97%) reported at least good student learning outcomes.

Around one-third (37% and 34% respectively) reported very good student awareness of the way they learn, and student capacity as independent learners. Around nine in ten (88% and 91%) reported at least good outcomes in both of these areas.

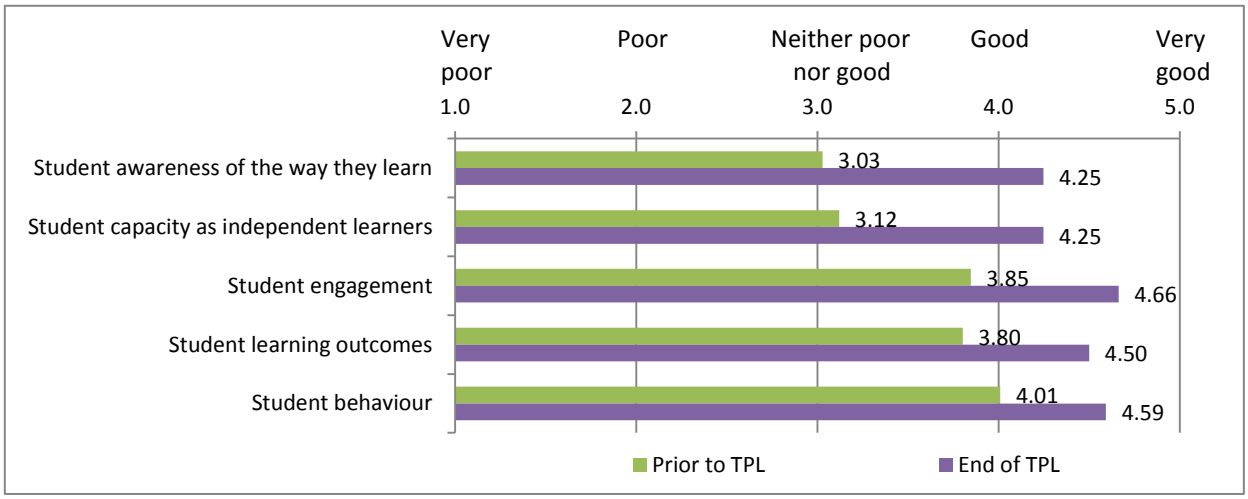
Figure 36: **Now, how would you rate the following in your students? (second survey n=87)**



As shown in Figure 37, in comparison to the student outcomes reported by teachers in relation to before they commenced TPL, there have been significant improvements across all measures.[12] Tests of effect sizes show that these teacher-reported student outcomes advanced between 0.6 and 1.2. These improvements included:

- Student awareness of the way they learn improved by an effect size of 1.2. This represented an increase from 5% of teachers reporting very good student awareness to 37% by the end of TPL (and cumulatively an increase from 33% to 88% of teachers reporting at least good student awareness)
- Student capacity as independent learners improved by an effect size of 1.1, with an increase from 6% to 34% of teachers reporting very good (and 41% to 91% at least good) student capacity
- Student engagement improved by an effect size of 0.9, with an increase from 25% to 67% of teachers reporting very good (and 72% to 99% at least good) student engagement
- Student learning outcomes improved by an effect size of 0.8, with an increase from 17% to 52% of teachers reporting very good (and 72% to 98% at least good) student learning outcomes
- Student behaviour improved by an effect size of 0.6, with an increase from 35% to 63% of teachers reporting very good (and 76% to 97% at least good) student behaviour.

Figure 37: **Before you commenced TPL / Now, how would you rate the following in your students? (first survey n=111, second survey n=87) (ordered by largest difference)**



In some limited cases, the outcomes described by the students in the focus groups were similar to what the teachers described, although the extent of the outcomes reported appeared different or were placed in broader contexts by the students (particularly in higher year levels). This included students describing aspects of their schooling, teaching or learning that affected their overall levels of outcomes but were beyond the scope of the TPL inquiry. In each case, however, the students were still positive about the changes that had been made.

Student discipline/content knowledge

All case studies achieved demonstrable improvements in student discipline/content knowledge, with five (42%) reporting strong improvements in comparison to prior years. These case studies were generally focused on a particular subject area, such as literacy, numeracy, humanities or science. In some cases this related to improved differentiated learning or self-directed learning, combined with improved evidence of

[12] Statistical significance based on a Chi-Square test. This is based on self-reporting by teachers, so some caution in interpreting the results should be exercised.

student needs and teachers responding to those needs. Some teachers compared their results to standardised improvements and found 2-3 years growth had occurred within the single year. Others used school-wide datasets (i.e. On Demand) to compare students' results in previous years with their current results. Reports of improved discipline/content knowledge were confirmed by the student focus groups. As part of this, students discussed their improved results in the subject area; reflected the language of new strategies employed; and drew clear links between the changed teaching practice and their improved learning.

> **Consultation with an evidence group that drew on students from across year levels illustrated a powerful consistency in the use of language describing the new literacy teaching strategies. The breadth and depth of student comment was compelling. Students explained the nature of techniques being used in their classrooms and the outcomes these techniques were designed to achieve.**
> ***"We have been using a new text called Fact, Question, and Inference. This helps us clarify our wondering as well as making us think deeper about our questioning."***
> ***"We find out new facts, information, and vocabulary."***
> ***"We get to find out all about the emotions that the characters are experiencing."***
> ***"We get to find out other's opinions about a text or your reading."***
> ***"Footprinting lets you express your opinion freely."***
>
> **During small group work they provided deep and rich responses to questions about the impact of these strategies on their learning. The following quotation was from a Grade 4, who was asked to speak about how the new learning strategies compared with past experience.**
> ***"When I first started as a prep I found that I wasn't very confident reading but now being a Grade 4 I'm able to read independently and I can get more of a clear understanding about a text and I can think in a deeper position."***
>
> **Comments from other students also illustrate this consciousness about how the new approach is different from previous techniques.**
> ***"In Grade 1/2, we usually just focused on visualising but now we focus on deeper thinking with our footprints."***
> ***"At my old school we focused on getting up to Level 30 step by step but we now use strategies such as literature circles where we share our opinion and analyse whether we believe that is true."***
> ***"In prep we learned to sound out words but now we can read them fluently it has made it easier."***
>
> **And consistent with the teachers' desires to increase enthusiasm and interest was a comment from Year 4 student.**
> ***"In Year 4 we read stories. Now it is easier because we use real life topics and it is not boring."***
>
> **Much of the student feedback about classroom strategies, and the impact on their learning, was detailed and reflective.**
> ***"Right now in reading we are learning about deep footprints and the ingredients in them. We have been reading The Deliverance of the Dancing Bears then writing deep footprints. The power of that is amazing and really helps you think of the text."***

> ***"By being able to visualise the stories in my head and I can think of facts, wonderings, and questions by listening to that little voice in my head – the 'inner conversation'."***
>
> **The students were also able to draw links between particular strategies and the ways in which those strategies were improving their skills.**
> ***"Literature circles help to express your thoughts on the same texts others have to read to have a deep discussion and when we researched and read literature circles on the asylum seekers it helped me to form an opinion."* (Case study extract)**

As the above case study also demonstrates, in many cases the improved discipline/content knowledge was closely tied to improvements in students' engagement in the learning (i.e. changes in their attitudes and dispositions).

> **The students quickly embraced the new approach to spelling, which reflected the enthusiasm of the teacher as well as the substance of the change. They were able to articulate that "mistakes are proof we are trying" and that they were "brave". By the end of the year the impact of the spelling TPL on students was seen as quite profound. This was strongly supported by evidence, which comprised a video of the new way of teaching, before and after work samples and the application of multiple primary inventory spelling tests. Not surprisingly the preparedness to take risks also impacted positively in reading and maths subjects. (Case study extract)**

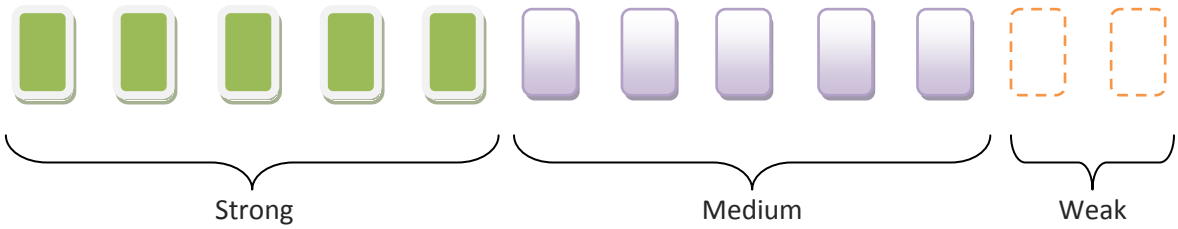
In a few case studies, the improved discipline/content knowledge had been brought about by explicitly linking topics across two subject areas.

> **Both teachers commented on students now using links between subjects. Previously this had been compartmentalised (i.e. students used maths concepts in Maths; language and literacy concepts in English). The English teacher also has the evidence class for Humanities, and said that the class is using survey and graphs with students now making links to their maths learning which was not there before. The Principal also commented on the increased confidence of students and the changed attitude to their ability. There had also been a significant shift for these students in the results in On Demand last year to now. The Principal said it was due to the quality of teaching and support they have received this year. (Case study extract)**

Teachers noted the difficulty in comparing student results to prior years. These difficulties included having different student cohorts, and the use of new techniques to collect evidence. In some cases the final results were not yet known by the time of the final site visit for the case study, although some initial tests as well as observational evidence suggested that students were advancing faster than previously. For these five case studies (42%) the improvements have been classified as medium. Students in these focus groups still confirmed the advancements they had made in their discipline/content knowledge in 2013, although the evidence did not reveal the extent to which these improvements were in excess of what would normally have been expected.

The remaining two case studies (17%) that have been categorised as having only weak improvements in student discipline/content knowledge were both focused on improving student engagement. This means that improvements in student content/discipline knowledge were not yet clear through evidence but were expected to occur in a longer timeframe.

Figure 38: **Extent of case study students' improvements in discipline/content knowledge**



When asked to describe any student outcomes that had been achieved through the TPL inquiry, survey respondents most commonly identified outcome relating to improved discipline/content knowledge was improved literacy (22%). This was the fourth largest theme overall, with more common responses relating to improved skills or attitudes. The sixth largest theme related to improved general learning outcomes (12%), while a few responses related to improved numeracy (3%), and two related to being better able to apply the learning to the 'real world' (2%).

Student capabilities and skills

All case studies achieved demonstrable improvements in student capabilities and/or skills, with eight (67%) reporting strong improvements in comparison to prior years. Similar to the discipline/content knowledge improvements, these case studies were generally focused on a particular subject area, such as improved capabilities and skills in literacy, numeracy, humanities or science. In some cases this related to improved skills regarding self-directed learning, or adapting to new teaching strategies that required changed student input, such as more active reading and spelling tasks, or new learning at home strategies.

> **The students themselves were incredibly positive about the Daily 5 and Café approach. They were able to describe what the Daily 5 and Café approach involved in detail. They reported that it was different to how they used to do reading and spelling and all 16 students in the focus group were strongly positive about it. Feedback included that *"reading to self is good because it is fun and it helps you get better at reading"* and *"reading to someone is good because it helps you with your strategies".***
>
> **Other observations by the students included:**
> ***"I'm being taught at my level"***
> ***"Conferences help me because the teacher explains the strategies"***
> ***"Listening to reading helps my expression"***
> ***"I can read accurately!"* (Case study extract)**

Other improved skills included improved abilities to complete assessments, tests, or other pieces of work that were targeted for improvement through the teachers' inquiry.

Some case study teachers described the self-directed learning skills that had developed in the students, in response to their changed teacher practice.

> **This teacher described the role students were playing in supporting and explaining concepts to one another; that the students themselves were playing a key role in presenting information to one another in ways that made sense to them in their own language. *"[My students have been excited by] peer mentoring stuff on their own goals***

> ***and seeing the change in the relationships with their peers. They get to see each other in a different way. The change in their relationships has been interesting to watch."*** **This teacher also spoke of students' improvements across several other aspects of learning:** ***"I knew there would be growth, but I never expected the depth of understanding they have – for them to have the confidence to explain what they're thinking, why we're doing what we're doing, and how that links to the real world."*** **(Case study extract)**

Four remaining cases (33%) were categorised as having medium improvements in student capabilities and skills. These cases described some improvements; however, these were not the focus of inquiry and, as such, have not been described in detail. In addition, these improvements were not measured through the use of evidence. Nevertheless, it is instructive to briefly note these improvements. Such improvements included abilities to complete tasks to a higher level, more independent learning and research, and the impacts on capabilities and skills through more differentiated learning. One of these case studies was discussed previously under discipline/content knowledge and had strong improvements evidenced by one teacher, but less strong improvements evidenced by the other teacher involved. This has thus been categorised as 'medium' overall.

Figure 39: **Extent of case study students' improvements in capabilities and skills**

The case study findings reflect the survey responses. When teachers were asked to describe any student outcomes, the largest theme was students' increased awareness of themselves as learners, including setting goals and using the language and strategies. This was mentioned by approximately one-third of respondents (34%) and reflects the fact that 'student awareness of the way they learn' had the largest increase of the student outcomes measured in this evaluation's pre and post surveys of teachers (as shown previously in Figure 37).

> ***Improved understandings of self as a learner and ability to describe personal learning goals and strategies.*** **(Survey response)**

Some teachers linked this improved self-awareness as a learner with the improved use of evidence with the students.

> ***Students have been exposed to a lot of reflection and self-assessment strategies and experiences. I have used one on one counselling, I record their conversations and have photographed their evidence with the student included. I have video recorded their comments.*** **(Survey response)**

The third largest theme related to improved independence as learners (22%).

> ***A sense of autonomy and independence with their work. An ability to critique their own work.*** **(Survey response)**

Various other improvements in skills were also mentioned, including improved:

- Discussion skills, including improved communication, articulation, and listening (8%)
- Organisation skills, including meeting deadlines and balancing multiple tasks (7%)
- Teamwork skills, including collaboration and sharing knowledge (7%)
- Questioning skills, including being able to ask deeper questions, be more reflective, and demonstrate deeper thinking (5%)
- Information Technology skills (3%).

Student attitudes and beliefs

All case studies achieved demonstrable improvements in student attitudes and beliefs, with all twelve (100%) reporting strong improvements in comparison to prior years. This made improvements in attitudes and beliefs the strongest area of student outcomes reported. These improvements spanned improved engagement, confidence and motivation, as well as student beliefs in themselves as learners and belief in their ability to achieve higher results. Teachers reported that these improved attitudes and beliefs generally flowed through to improved discipline/content knowledge and improved skills and capabilities.

> **The humanities and English teachers linked their units of work together, and focused on asylum seekers. The humanities teacher was motivated to create change in her classroom because of research linking student engagement with connection and relevance of topic material. She explained that, "*We spent a lot of time on teenagers in other countries. It was all about trying to connect them to ideas. I really broke it down to the human level through case studies."* The humanities teacher's goal of cultivating empathy and encouraging new ways of looking at the world was manifest in comments from a number of students, illustrated by the following example. *"It's something happening in our real world. We have asylum seekers in our community and it's good to know what they've gone through. It made us see them from a different point of view."***
>
> **Students noted the change in practice and the impact it had had on their learning:**
> ***"They collided the classes together, as we learnt about asylum seekers in English and humanities in two different ways, and led it to be more interesting."***
> ***"We went into more detail on one thing instead of three different things. It was helpful doing one topic more in-depth, and you could just focus on that one thing."***
> ***"We had statistics [from humanities] to back up our arguments [in English]."***
>
> **The English teacher's purpose of developing analytical thought amongst students and building critical writing skills was also reflected in some comments.**
> ***"I thought it was helpful to understand your opinion. It was easier to write an opinion essay when you know a lot about both sides."***
>
> **The goal of the English and humanities teachers to encourage greater critical engagement by students was reflected in the conversations students were taking outside the classroom.**
> ***"We were comparing between different classes. I talked about it with my family. I got my parents opinions. They agreed with my opinion."* (Case study extract)**

Some students linked their improved engagement or motivation to the teacher providing more differentiated learning.

One student provided quite a detailed explanation of the importance of differentiated learning to engagement. "*Students have different learning skills levels. If a teacher stands up in front of a class and teaches one topic, the lower level students might not understand and they get stressed out and can't concentrate on their work because they don't know how to do it. And … the higher level students they will get bored and won't pay attention."* (Case study extract)

For some the changed teacher practice had impacted on students' views about the subject area that was the focus of the inquiry, making it seem more interesting and appealing, and thereby increasing engagement and motivation.

The student response as reported by the teachers was "overwhelming". This was strongly confirmed by the students themselves. It was "less boring', "cool", "fun" and "real". Maths for some was "now my favourite subject." The students said with great enthusiasm that they would love to have more. Other evidence used to judge the impact of the new teaching included a survey of students' attitudes to maths, photos, and testing using tools from the Noyce Foundation. Impressively, all these sources of evidence included before and after comparisons and all produced strongly positive results. (Case study extract)

In case studies it was often the cumulative effect of changes in teaching practice, and improved skills and content knowledge that resulted in such strong improvements in student attitudes and beliefs. The confluence between these three strands of learning and their interrelated nature was talked about in relation to changed teaching activities and their effect. For example, increased practical activities, more regular assessment and feedback, and more in-depth teaching or questioning – which in turn improved content knowledge and skills, while at the same time building confidence, which then lead into further content knowledge and skill development, etc. Often teachers found it hard to separate out specific improvements in the various strands of learning, without immediately describing them as interlinked.[13]

The maths teacher said that there was an increased confidence in the whole class, improved understanding of maths concepts across the board and students were making the links between other subjects. The teacher noted that some students had not done much maths in primary school and some had been really struggling coming to class because they did not like maths. The improvement in confidence was particularly notable in the students targeted in the focus group. They said it has really lifted their self esteem and confidence. Test results had improved dramatically, with these students achieving the same as the top students (i.e. 17/20).

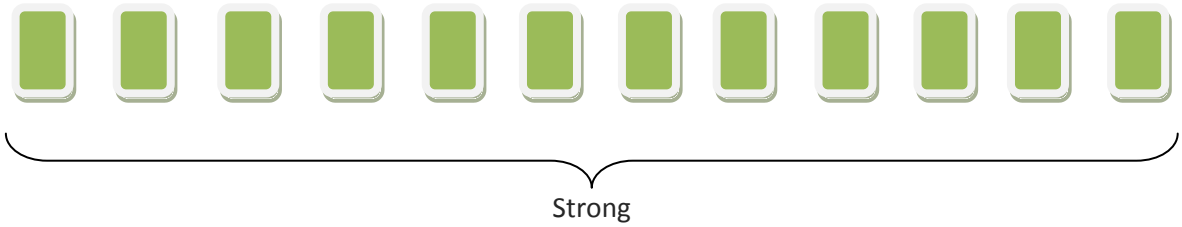
Students were positive overall about learning about the Big Ideas in numbers. They said they enjoyed the hands on activities outside which made learning fun for them and also helped them learn concepts. Students felt that the mix of activities and understanding their practical application, and using the textbook, helped them learn. Students appreciated the regular testing as knowing their results and helped them understand where they needed to improve and helped direct their learning. (Case study extract)

[13] Students were not asked to separate out their descriptions of improvements across the three strands.

Some others noted the renewed enthusiasm of the teacher for the subject area, or for trying new strategies, affected the students' enthusiasm. This was also reflected in some cases regarding the teachers' willingness to try new things and take risks, which then encouraged the students to do the same. In many cases the improvements in student attitudes or beliefs were clearly directly attributable to the changes achieved by the teacher.

> **The students' response was initially mixed and the language and length of the rubric needed adjustment to make it more student-friendly. With those improvements the teachers noted a marked change in how they communicated with their students and how in turn the students used the rubric. They became much more interested and this had the effect of increasing their motivation and competitiveness. It also helped them understand where they were in relation to their AusVELS levels. Importantly it also helped guide them on how to improve and to become more independent in their learning.**
>
> **When asked directly, students saw the new rubrics (particularly the later ones) as helping them to do well by setting clear criteria. This allowed them to understand much more easily the progress they were making, how they achieved their marks and how to improve. They also liked the clear markings (including the colour and structure) of the new rubrics. Their favourite parts included the 'tips' column, and the examples and explanation of language provided in the later rubrics. Their suggestions for improvement were for even clearer wording and examples of expected words and explanations. One student said: *"It broke down the task into small chunks. It helped us to understand the task and helped with the VELS levels. It showed us how we were going and gave us tips."***
>
> **In an ideal world the teachers would have liked to see even more marginal students get involved as active learners. They also described some ways they had adapted their teaching for individual students based on the evidence they saw through using the rubric. While they had some evidence for the improved student learning they noted the difficulty in accurately measuring gains students made that were attributed to the rubrics. *"They've become more independent in their own learning, and been able to self-manage. Definitely at the same time as the rubrics were coming into place, they were able to submit tasks more and on-time. It's hard to know though, because they know I'm putting effort into this so that might be affecting it."* (Case study extract)**

Figure 40: **Extent of case study students' improvements in attitudes and beliefs**



The findings of the case studies reflect the responses to the survey. When teachers were asked to describe any student outcomes, the second largest theme related to improved engagement (29%).

> ***Some children who were not engaged in their learning have become more engaged due to the project based practice that I used which incorporated comprehension strategies. These children have therefore had better outcomes as a result of this engagement.* (Survey response)**

The fifth largest theme related to improved confidence (17%).

> ***More confident to tackle new tasks and engaged in tasks.*** **(Survey response)**

Other responses that related to student attitudes or beliefs included improvements in:

- Students feeling more responsible and accountable for their own learning (9%)
- General attitude or behaviour (9%)
- Enthusiasm, enjoyment or motivation (7%)
- Risk taking, including not being scared to get something wrong as long as it is helping them discover and learn (5%)
- Attendance (2%).

Impact on wider school community

The TPL applications required teachers to articulate how their identified student need linked to school priorities, and how collaboration with others in the school community would support their inquiry. They also required teachers to describe how their identified professional learning needs linked to their performance plan and school priorities. They were not asked how they would measure these impacts or links.

All case studies linked to an identified school need, with ten doing so strongly. In their inquiries, teachers were able to successfully draw links between the school needs and their individual needs as teachers.

Eleven case studies (92%) were collaborating or sharing their learnings with other teachers at the school, with five doing so regularly or having a strong focus on it. Many had influenced other teachers through staff meetings, professional learning teams, key learnings areas, or within year level teams. Those in leadership positions generally found it easier to share their learnings across the school.

> **In addition to collaborating internally, the team was engaged in collaboration with others through professional learning teams and informal staff conversations. The English teacher in particular was able to share in various ways because of her leadership role in the school. The science teacher had been able to draw on resources and rubrics from a past TPL science teacher. (Case study extract)**

Ten case studies (83%) were aiming to influence their whole school, year level or key learning area through their TPL inquiry. Teachers in the case studies also described hopes that their inquiries would impact on school-wide results, such as On Demand and NAPLAN.

> **The TPL teacher was sharing her learning with other staff through fortnightly Professional Learning Team meetings, unit meetings, and whole school professional development and commented that there had also been some peer observation taking place. She considered that widespread peer coaching would be a useful mechanism for improving the quality of practice into the future and for embedding practice across the school. (Case study extract)**

Ten case studies (83%) developed resources or materials as part of their inquiry, with six having a strong focus on it. These case studies had generally already been sharing these resources and materials with other teachers. This was also true for case studies which had developed new units or had implemented evidence-based pedagogical approaches. Teachers were generally hoping to share these new resources and practices more broadly across the school, either in targeted ways (such as sharing it with another key learning area,

through teams, or with another year level) or in more broad ways (such as through staff meetings or online portals).

> **They planned to continue using and sharing the rubrics they had developed, as well as develop more rubrics next year. They also planned to continue developing an individual student profile for new classes, although in a more time efficient manner. (Case study extract)**

Many principals in the case studies reported effects from the TPL spreading through the school and influencing school culture, such as an increased focus on professional learning, professional conversations, collection and use of evidence and data. Some noted this effect built as their school accessed TPL multiple times across years. One school that has accessed TPL several times has established their professional learning reviews and plans around an evidence-based inquiry model.

> **Discussion with the Assistant Principal revealed the school has been working towards embedding a culture of professional development modelled around the TPL inquiry cycle. As part of their professional development plans, teachers at the school are being asked this year to nominate areas of curriculum or teaching reform they wish to advance based on the inquiry cycle model. The Assistant Principal expressed a strong commitment to evidence-based practice, indicating that in their professional work all teachers – not just TPL participants - need to ask (i) what do my kids need to know (ii) where are they at (iii) what do they need (iv) what do I need to enable that to happen (v) what am I trying (vi) how do I know it's working. The school has applied successfully for TPL on previous occasions. She described the impact of TPL on their school's culture and processes regarding professional learning and evidence-based inquiry: *"The Professional Learning Team support is coming through too now. Last year's TPL and this year's is informing how the Professional Learning Teams and performance recognition program works, and we're modelling the TPL process to be what everyone has to do with their performance review. Everyone's doing an inquiry cycle on an area of their teaching."* (Case study extract)**

Supports

This section outlines the findings in relation to the various supports that TPL teachers received to successfully undertake their inquiries, including:

- The Induction Day
- The Support Program
- Practical resources
- Collaboration.

Induction Day

This evaluation's Interim Report noted that teachers in the case studies were generally positive about their experience at the TPL Induction Day. This reflects the feedback from the first survey in which the majority of respondents were satisfied with the content, design, and delivery of the Induction Day. Overall three-fifths of respondents (62%) reported the day was useful for their TPL investigation.

> **Both teachers benefited from the Induction Day. One described how he was "lost" at the time and how the day helped him focus more clearly on what was achievable. It also provided a road map for the year ahead. (Case study extract)**

Participants in the case studies explained they improved their understanding of TPL's individual focus, the focus on evidence, the three strands of learning, and the student profiling activity. Principals and participants from four schools felt the resources and templates provided were useful, including the 'learning power quiz'. Four also mentioned that the networking element was a highlight.

Fewer respondents were satisfied with the timing of the Induction Day. In the case studies, participants and Principals from seven of the schools (58%) stated that they felt the TPL Induction Day was held too late in the year. Four of these clarified that it would have been better to hold the Induction Day the previous year, so that participants could plan and think about their investigation during the summer break. Participants at two schools waited until the Induction Day before they began their TPL investigation, and felt they are behind the other schools in their investigations as a result.

In the case studies one of the biggest highlights of the day was the attendance of Principals. From first survey 66% of respondents indicated the Principal had attended the Induction Day, 23% indicated a Principal's delegate attended (such as an Assistant Principal), and 11% indicated neither their Principal nor a delegate attended. In the case studies, while some saw the Principals' attendance as merely symbolic of their support for the participants, many others felt the Principals' presence helped to achieve greater Principal engagement and school support. Respondents from half of the schools felt that their Principal gained a useful understanding of the program and its focus on individual teachers' needs.

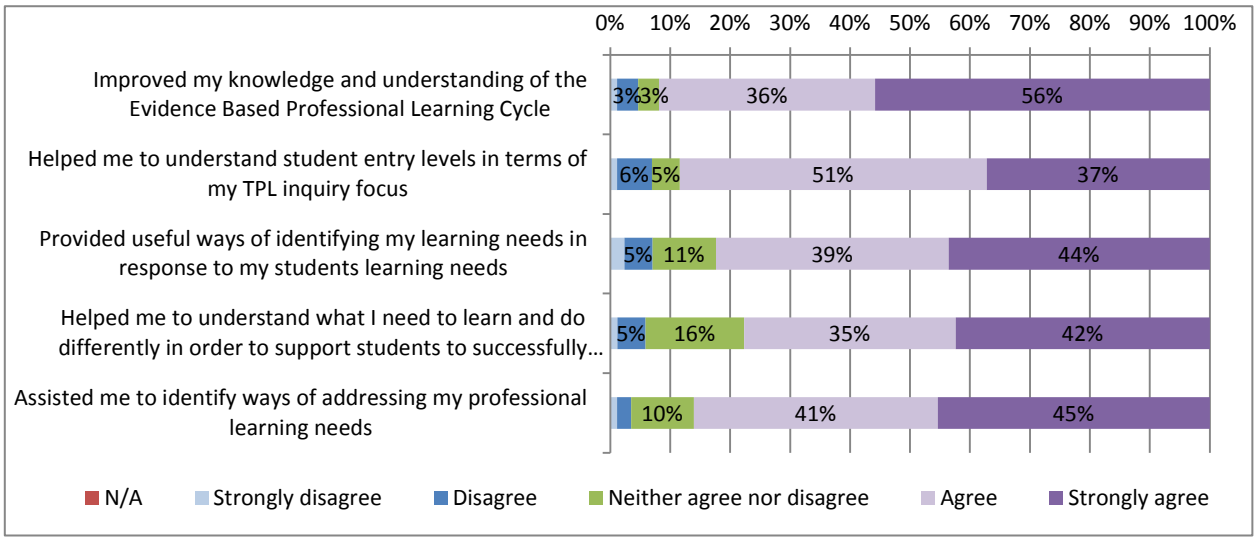
> **The school Principal had seen two teachers benefit substantially from TPL the previous year and had no hesitation in supporting the TPL applications for 2013. He felt much more engaged on this occasion as a result of attending the Induction Day and benefited from the rare opportunity to network with other Principals. He particularly appreciated the inquiry model that TPL was based on and saw opportunities for using that model in related school projects. Apart from supporting the TPL teachers he saw his role as sharing the learnings from their TPL across the wider teaching group at the school. (Case study extract)**

Support Program

The Support Program was an important source of support and guidance for the teachers throughout their inquiries, as indicated across survey responses and the case studies. Spreading days out across the year was an important feature in maintaining momentum and direction for teachers' inquiries. Teachers reported that the networking with other teachers it provided was particularly useful.

As shown below in Figure 41, of every ten respondents, between four and six strongly agreed (37%-56%), and cumulatively between around eight to nine (77%-92%) at least agreed, that the Support Program had been useful across a number of the programs' intended learning outcomes. The strongest response related to improved knowledge and understanding of the Evidence Based Professional Learning Cycle. The least strong response was in relation to understanding what to learn and do differently in order to support students to successfully progress.

Figure 41: **The TPL Support Program… (second survey n=87)**

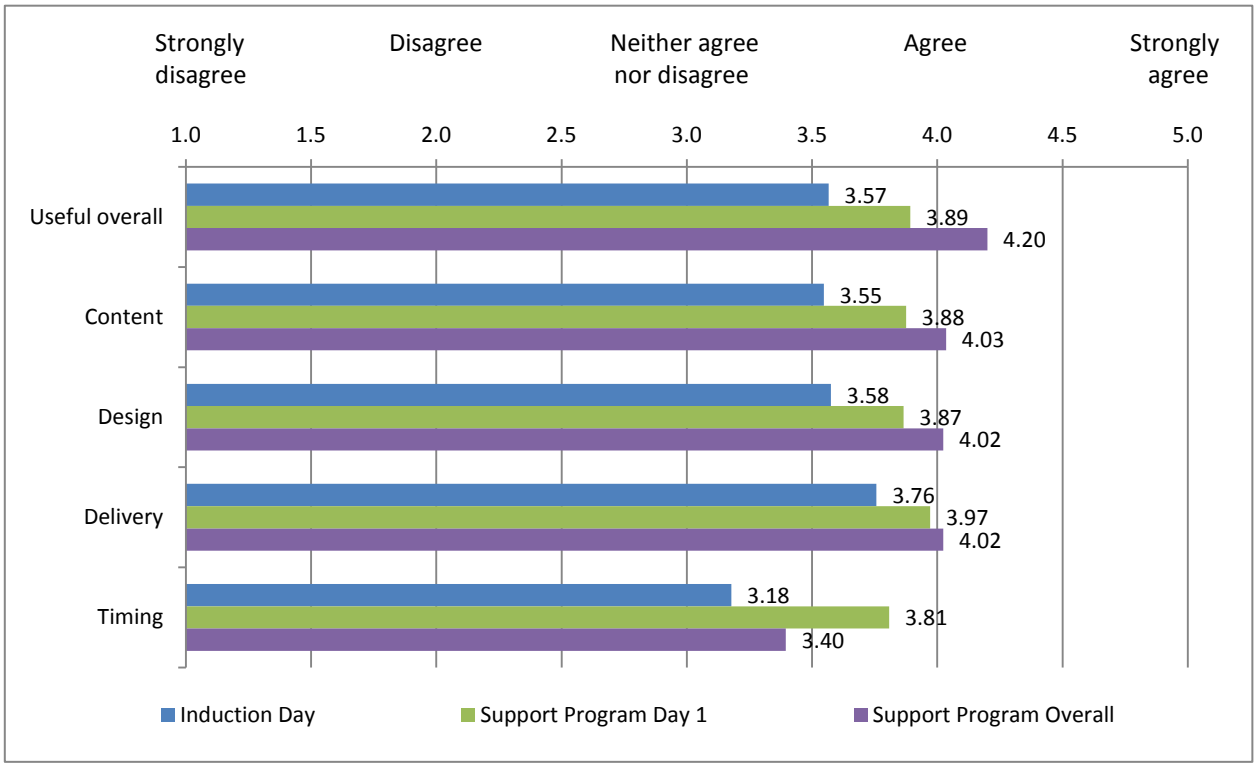


A theme from the comments that teachers gave about the Support Program (16% of comments) reflected that teachers were positive about the program, generally found it useful and gave their thanks for it. Teachers also noted that they would recommend it to others.

> ***I would like to take this opportunity to thank those involved in the TPL opportunity because I have personally experienced huge growth in my teaching practice and feel re-energised …*** **(Survey response)**

As shown in Figure 42 below, teachers generally indicated they were satisfied with the content, design and delivery of the days. The Support Program overall (Days 1 through 4) was rated more strongly than the Induction Day and the first day of the Support Program. In the case studies teachers noted how much they appreciated the smaller group sizes in the Support Program as opposed to the larger group size for the Induction Day, which allowed for more individualised support for teachers and their inquiries (particularly how the models of inquiry into individual teacher practice related to the aims outlined in their TPL application, encouragement to refine their inquiry, and knowing they were 'on the right track'). Overall in the survey, teachers were less satisfied with the timing of the days, particularly the Induction Day.

Figure 42: **Please rate your agreement with the following statements; Overall, it was useful for my TPL investigation; I was satisfied with the content/design/delivery/timing (Induction Day and Support Program Day 1 from first survey n=110, Support Program Overall from second survey n=87)**



The Support Program overall being rated higher than Day 1 of the Support Program reflects the case studies in which teachers generally viewed Days 2 and 3 of the Support Program as most useful. In the case studies many noted that it was at Day 2 that they started to refine their inquiry with support from the facilitators. Teachers also found the networking provided during the Support Program useful for their inquiry (18% of comments), such as on Days 2 and 3, which also reflects feedback from the case studies. Some of these teachers suggested it should have been a more formal part of the program, should be more prominent in the program, and/or a greater aspect of the online space.

> ***I found the most beneficial aspects was networking and sharing experiences with other participants with similar focuses.*** **(Survey response)**

Day 1's usefulness was affected by teachers reporting it occurred too late in the year, similar to the feedback regarding the Induction Day. The main theme from teacher comments about the Support Program in the second survey was for it to start earlier (37% of comments). A third of these comments went further to suggest the first day occur in the prior year. Some teachers in the case studies explained that they had already progressed in their inquiry beyond what was covered during Day 1. They also wanted greater clarity on Day 1 about the expectations of TPL and how these related to their application if teachers perceived them to be different from what had been approved, and support to refine their approach to their inquiry. In the survey some of these responses also linked this feedback to finding the start of the Program confusing or that their inquiries were delayed. Improved planning and clarity at the start was another theme in survey comments (6%), such as the facilitators giving more support to plan and refine the inquiry.

> ***The Program did not start until … far too late. Starting near the end of the year before would have been beneficial to help us decide what and how we were going to do our research.*** **(Survey response)**

Day 4's usefulness was affected by it occurring too early in Term 4, which meant that teachers could not present on what they had achieved by the end of their inquiry. This was reflected in 8% of survey responses as well as feedback from some teachers in the case studies. In the case studies the day was also affected by some teachers perceiving a limited accountability for teachers who did not attend Day 4 and thus did not present about their inquiry.

Three case studies (25%) found the Support Program offered them only limited support in their inquiry. Teachers from these case studies would have preferred more practical support; the provision of relevant resources; suggestions for school to visit; and more networking generally with other teachers doing similar things. This translated into feeling the days were unguided, unplanned, or too long. Some teachers also found there was limited support between days. One case study felt the facilitators did not understand the context of special schools.

Other suggestions from the survey regarding the Support Program included:

- More personalised support, including topics being more tailored to specific needs (6%)
- More support to hold schools accountable for the allocation of TPL time to the approved participants (6%)
- Using a different approach to grouping participants for the Program, such as having separate groups for primary and secondary teachers (or ensuring there was a balance in each group), or having separate groups based on similar focuses of inquiries (6%).

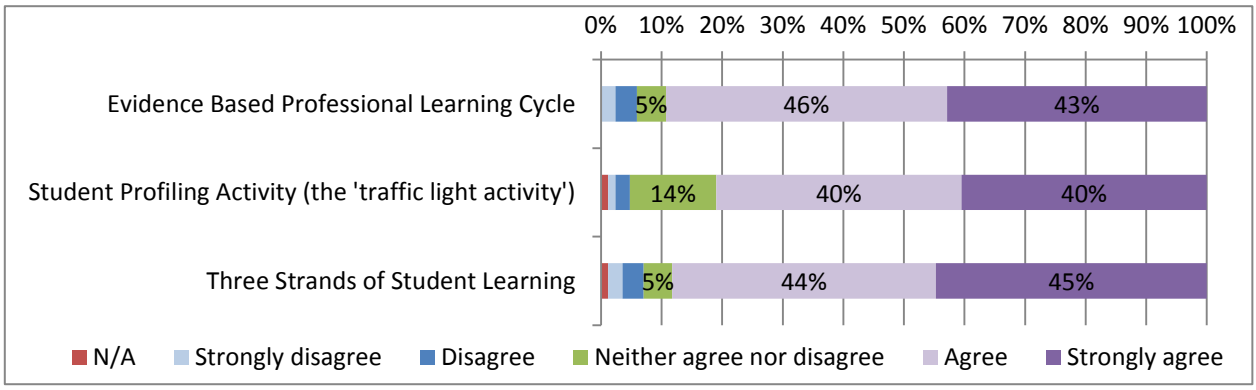
In the case studies, few teachers had used the Program's online wiki space. Those that had tried to use it either had problems accessing it or found that it its usefulness was limited by the limited engagement of others. Suggestions included that access be provided during the days themselves so that people were more likely to log in and interact.

Practical resources

There were three key pieces of practices materials/resources provided to the TPL teachers that were investigated as part of this evaluation. Teachers generally indicated they had found each of these resources useful, including the:

- Evidence Based Professional Learning Cycle (89% agreed or strongly agreed)
- Student Profiling Activity (80% agreed or strongly agreed), also known as the Traffic Light Activity
- Three strands of student learning (89% agreed or strongly agreed).

Figure 43: **I found this resource useful… (second survey n=86)**



The case studies were categorised as to how useful the teachers found each resource, guided by how often they used it, how central it was to their inquiry, the impact on their inquiry of using it, or general feedback provided by teachers about the resource:

- The Evidence-Based Professional Learning Cycle

- 2 case studies (17%) found it strongly useful and it became central to their inquiry and their ongoing practice and reflection, or helped guide the direction of their inquiry

> ***"Understanding this was important because it helped me get clear on what I needed to do and what I was looking for."*** **(Case study extract)**

- 8 case studies (67%) found it useful to some extent, particularly at the Support Program days

> ***"The cycle is just common sense. It's putting it into a structure that helps. I liked the diagram. It's a good framework to follow. At different points, at the TPL workshops, it helped us know where we were at, and where we should be at, and what comes next. We started making rubrics, but noted how we linked that back to the data and cycle. Also, it's a continuous cycle. Not just one cycle."*** **(Case study extract)**

- 2 case studies (17%) did not find it particularly useful, or it was unclear how useful they had found it.

- Student Profiling Activity
  - 5 case studies (42%) found it strongly useful, with teachers undertaking it and setting up individual profiles for each of the students in their evidence groups

> ***"I found the learning profile really, really helpful. I liked it because it had a clear set of variables'. "I think I would have been pretty stuck without that tool – it helped me to see attitudes, skills and knowledge side by side."*** **(Case study extract)**

  - 5 case studies (42%) found it useful to some extent, with it informing their ongoing thinking
  - 2 case studies (17%) did not find it particularly useful (one being a special school setting, the other simply not using it back at the school).

- The Three Strands of Student Learning
  - 4 case studies (33%) found it strongly useful and it influenced the direction of their inquiry to a great extent, such as setting up organisation and memory buddies for students that needed it, or using it to drive evidence collection

> ***"This was really good because it helped me know where I was at with my students. When I planned activities I would use it as a guide."*** **(Case study extract)**

  - 5 case studies (42%) found it useful to some extent, with it informing their ongoing thinking
  - 3 case studies (25%) did not find it particularly useful or found it confusing (with one noting their special school setting had their own profiling model, another noting its difference to the three strands of AusVELS meant that it was confusing, and the final one noting they had already done their student pre-testing before they had been introduced to it).

Many case studies combined the use of these practical resources. Some were also planning to continue setting up learning profiles for students in future years after doing it for the first time as part of TPL.

> **The two teachers described the Induction and workshop days as fabulous for networking with others, especially in the same subject area. They found the Traffic Light activity easy to use and were very open to the other materials. "*We used the Evidence Based Cycle – we made it fit for us. We used the Learner Power Quiz and adapted that to use ourselves."* (Case study extract)**

In the second survey teachers were also asked what practical resources would be useful when beginning their inquiry. The most common response (27%) was examples of projects from previous TPL inquiries, either presented at the Induction Day or made available online, including work plans, key learnings or final resources developed. This included suggestions that former participants be made available for discussion.

> ***Projects from previous year[s would have been useful] to scope out future projects [such as a] website of projects from previous years.* (Survey response)**

Another suggestion was more student interview or survey templates (12%). Other suggestions included:

- Access to a university or online library or research database
- How to plan access/structure of days with principal
- Professional reading suggestions related to areas of inquiry, or targeted to primary or secondary teachers
- Lists of sources of data schools may already have
- Greater clarity about what was expected by the end of TPL.

Other teachers thought the materials provided were good and/or sufficient (12%). The materials included the three strands of student learning, the Learning Power student profiling activity, and the evidence-based professional learning cycle (although there was some confusion about differences in language between the three strands and the AusVELS strands).

Collaboration

All case studies reported that working as a team was one of the most important enablers of their learning – keeping on track and motivated, reflecting on the evidence collected, sharing focuses of their inquiry, student evidence-groups, distributing professional reading amongst themselves, reflecting on changes in practice and students, reflecting on the Induction Day and Support Program days, etc. Although teachers were approved for TPL individually, in all case studies where multiple teachers had been approved within the school, they worked like a team (i.e. multiple teachers collaborating regularly to undertake interrelated inquiries). In addition, these teams sometimes included teachers who were not granted TPL days, sometimes regularly and sometimes *ad hoc*. At least two schools in the case studies (17%) funded 'rejected' applicants to maintain a 'TPL team'.

> **Looking back, the teachers thought the main enabler for making the TPL successful was being able to undertake TPL as a team of teachers. "*Our advice is to work with a team. Across faculty where possible. The inquiry needs to be separate but similar, with a common goal. It was all quite different across different subjects and year levels, but with the same intention."* (Case study extract)**

Those that weren't able to work as a team as much as they'd liked found this a major impediment to their inquiry.

The teachers welcomed the time provided by TPL to focus on their professional development, however there had also been some frustration about the limitations of having only two periods a week in which to work collaboratively and advance that work. The official TPL participant was awarded 35 days altogether, which was allotted as three periods a week. The English teacher was also allocated three periods off, while the humanities teacher received two. Of the three periods, two were for collaborative work and one was timetabled separately. In articulating possible improvements for the future, the teachers expressed a preference to take at least a few whole days together as part of their time allocation. (Case study extract)

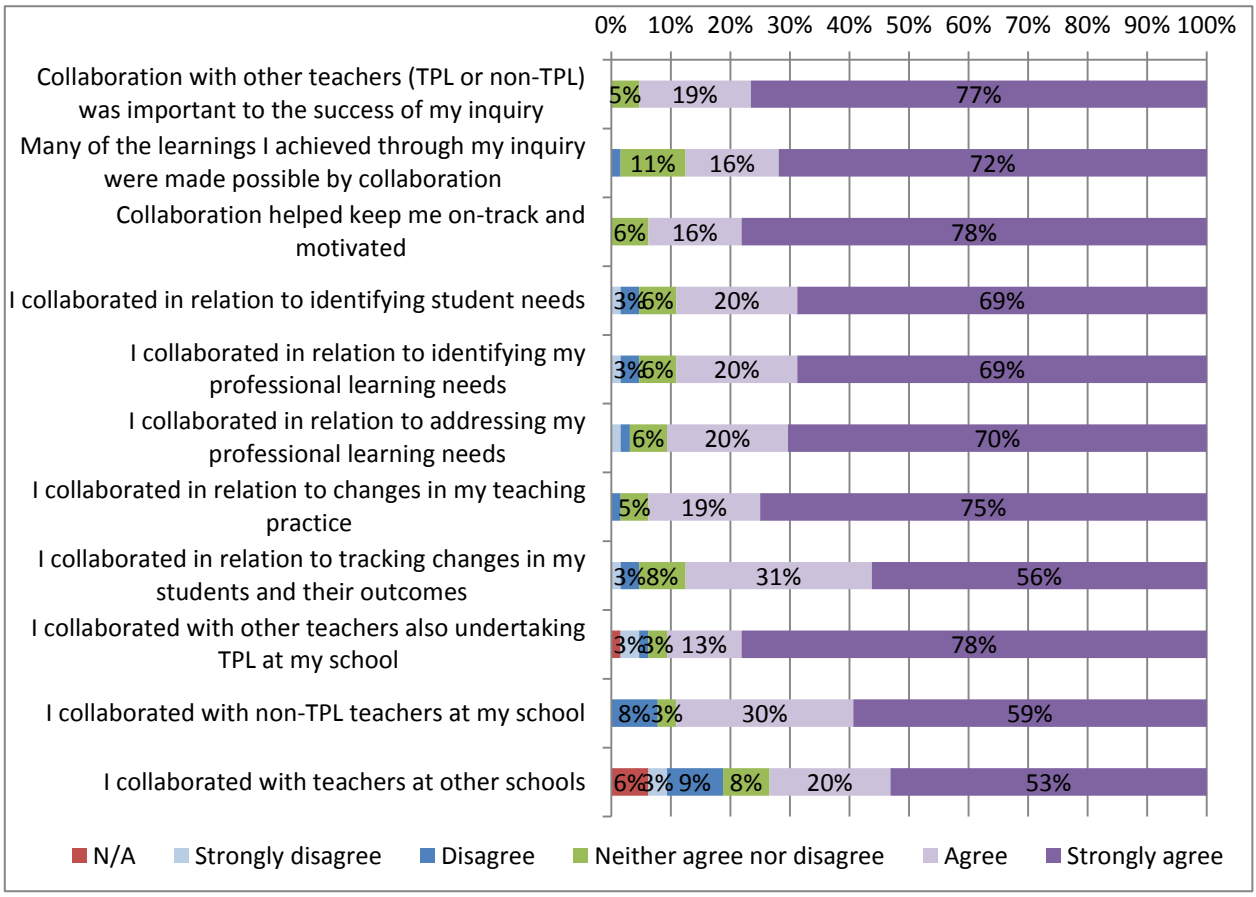
For some teachers, the sharing of learnings from the inquiry with colleagues beyond the TPL team had led to feedback and built into two-way collaboration as part of the inquiry.

Having adapted Di Siemon's tools, this teacher plans to make those tools available and see them incorporated across the entire school. A recording sheet she had developed, for example, had now become part of teaching staff's professional practice. This teacher explained that some of her colleagues had also already picked up some of the load for managing evidence collection, which had been of great assistance. She has also run forums for the whole staff with reciprocal benefits – the feedback to her has been positive, and in return, staff have provided further strategies and ideas to work with. Her own teaching team has also come to see how conferencing operates. (Case study extract)

In the survey, teachers were similarly strong in their agreement that they had collaborated and that it had been useful to their inquiry across a number of measures. As shown in Figure 44 below, around three-quarters of teachers 'strongly agreed' that they had collaborated and that it had been useful, and cumulatively nearly all at least agreed. This included that collaboration had:

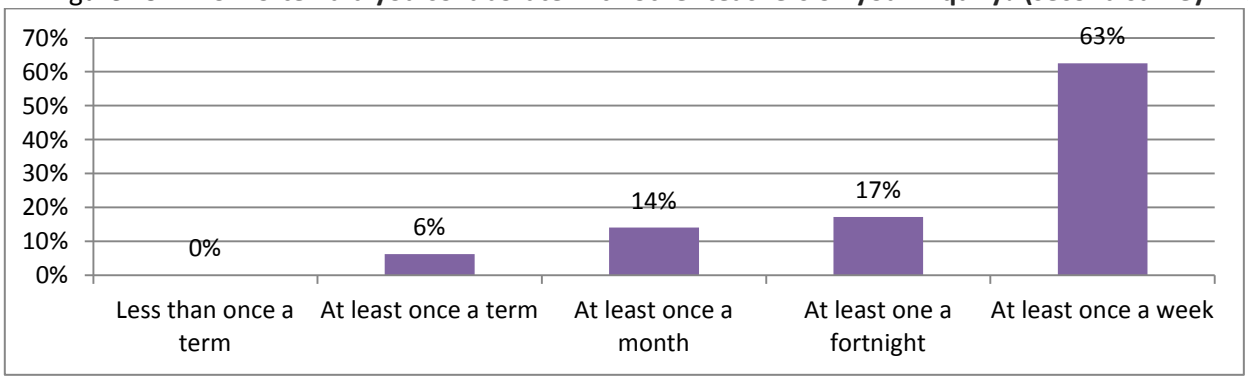
- Been important to the success of their inquiry (95% agreeing), had made new learnings possible (88%), and had helped them keep on-track and motivated (94%)
- Helped to identify student needs (89%), professional learning needs (89%), and ways to address those needs (90%)
- Supported changes in teaching practice (94%) and tracking changes in students and their outcomes (87%, although with fewer strongly agreeing)
- Been undertaken with other TPL teachers at their school (91%), non-TPL teachers at their school (89%), and (to a lesser extent) with teachers at other schools (73%).

Figure 44: **Please rate your agreement with the following statements (second survey n=65)**



Teachers were also asked how often they collaborated with other teachers on their inquiry. This could have included other TPL teachers, non-TPL teachers, and teachers either within or beyond their school. Around two-thirds (63%) indicated it had occurred at least weekly and cumulatively four-fifths indicated it had occurred at least fortnightly (80%). All teachers collaborated at least once a term. The option of 'less than once a term' was not selected by any respondent.

Figure 45: **How often did you collaborate with other teachers on your inquiry? (second survey n=65)**



A number of factors were reported as supporting collaboration across the case studies and surveys. In the case studies, teachers generally thought all of the learning they had achieved had been made possible by working as a team. The importance of working as a team was noted by many. In two instances schools funded 'rejected' participants so that a team could still operate. In several more instances teachers were concerned when other teachers at their school were 'rejected' but then later 'approved' in a second round of approvals. Many were now collaborating beyond their TPL team in order to achieve change for the whole school, their key learning area or year level. A key enabler for this team collaboration was TPL time scheduled together in at least double periods (and preferably full days). A shared evidence-group and/or a shared inquiry focus were all also considered enablers.

All of these factors were reflected in the second survey. As part of this, teachers were asked what factors supported collaboration. The main theme related to having the same time off as other staff or TPL participants (26%). A further 19% noted having the TPL time was helpful for collaboration, particularly having whole days at a time and scheduling the time in advance. A further 10% noted that being in a team enabled collaboration, and a further 10% noted sharing an aim or goal was helpful for collaboration.

Some teachers also noted how principal support (9%) or other school support (5%) helped collaboration, including where their inquiry was linked to a whole school approach (5%), as others where then interested in the learnings from the inquiry.

Other enablers of collaboration mentioned included:

- Professional learning teams
- Sharing the same students with others in the team
- Teaching the same year level
- Having a dedicated space to work.

Teachers were also asked what hindered their collaboration. The main theme was other responsibilities and obligations in the school that sometimes took priority over their TPL inquiry (21%). Other responses related to the use of time, including that it was too short or that they could only access TPL as small blocks (i.e. a period here or there) rather than whole days (14%), or that it was difficult to access TPL time together with other colleagues (10%).

Some teachers noted (10%) that they found it hard to collaborate with others whose objectives were different from their own, while others noted limited interest from colleagues (7%), that the principal was not supportive (5%), or that overall workload was prohibitive (5%).

Other, less frequently reported hindrances to collaboration included:

- Others in leadership positions were not supportive
- Parents or teachers were negative about the inquiry
- Other schools not open to being visited
- Late start to TPL
- Timetabling.

In the case studies, another hindrance was when non-official TPL team members could not attend the Induction Day and Support Program.

Other findings

Overall facilitators and hindrances for TPL success

The facilitators and hindrances for TPL success have been examined in-depth in prior year evaluation reports. The factors continued to be largely similar in 2013, including:

- Collaboration with other teachers (and a hindrance when teachers couldn't work as a team as intended)
- Support and leadership support, with positive feedback about school leaders attending the Induction Day and eleven case studies (92%) with positive school support
- Access to professional learning, including the Induction Day and Support Program, as well as other professional learning, experts, or visiting schools that are leading in the area of inquiry (and a hindrance when teachers had difficulty connecting with similar inquiries, with teachers from similar primary or secondary schools at the Support Program, or with the facilitators between Support

Days, as well as limited confidence in which schools to visit, which responses to trial, which books to read, and what inquiries had been done in this area already)

- Access to the TPL time in useful allotments as determined by the teachers (particularly whole days scheduled in advance with a regular replace teacher, or via a reduced teaching load, and scheduled at the same time as other colleagues)
- Regular evidence collection closely tied to the classroom
- Inquiries in which teachers could inquire into a need they had identified in their students and their practice, but that also linked to a school need
- Practical evidence-based assistance, such as the Learning Power survey, the three strands of learning, or the evidence-based professional learning cycle.

These factors closely reflect the enablers and hindrances identified in prior year evaluations of TPL.

In 2013 a key hindrance was the delay in approvals of applications and therefore the late start of the Induction Day and Support Program.

Accountability for access to TPL time

In at least six case studies (50%) there was some form of limited knowledge about access to, or use of all TPL days. Some of these linked this to the late approval and start of TPL. In the second survey, teachers were asked how many days they were personally granted,[14] and how many they expected to have used by the end of 2013. Responses show on average two TPL days would be unused by the end of 2013. Teachers were asked to explain any difference between the granted days and the days to be used. The main theme was issues related to being granted the time (17%), such as the principal not allowing them to access their full time allowance, or that they did not know how many days they had been granted. Other teachers noted that not enough allocated time had been put in the timetable to use it up within a year (14%). Some noted the late start to TPL (11%) and other prioritised classroom teachers for various reasons, such as staff absenteeism, student issues that arise or preparation for important student tests (11%). A few noted extra-curricular activities or sick leave.

Teachers were also asked what will happen to the days that would be unused by the end of 2013. Nearly half of those who commented (43%) indicated they would use the days in 2014. This included continuing the inquiry, continuing to research the area of focus, to implement the learnings at the school or share it with others through presenting professional learning or mentoring.

Three teachers (9%) indicated they would lose them or not be able to use them. Another three teachers (9%) said they will be, or were, used for the benefit of other staff.

Teacher characteristics for independent evidence-based inquiry

Teachers were asked what they thought makes someone ready for independent, evidence-based inquiry. Some talked about the importance of being open minded, staying flexible, and being willing to take risks while you trial and implement change (19%). Others emphasised the importance of having clear goals, aims, targets, or purpose for the inquiry, along with refining goals to be realistic (16%). Some suggested starting earlier in the year including accessing the support sessions and practical materials (14%). Others noted discussion with other colleagues, TPL participants, other schools and the Support Program facilitators as helping someone to be ready (10%). Other suggestions included:

[14] The case studies show sometimes the official allotment to an individual teacher is split with other teachers.

- Seeing pre-existing examples
- Collecting evidence
- Pre-reading
- Undertaking research
- Having a team
- Being honest with yourself about where you need to improve
- Enthusiasm
- Tracking progress
- Simply having the time.

Discussion

This chapter discusses the key findings from this evaluation, including that:

- TPL remained a strongly transformative experience for many teachers and their students' learning
- The structure of time release for teacher-led inquiry aligns with the practices of global high-performing education systems
- More changes in the classroom means more immediate student outcomes
- More use of evidence in inquiries means more evidence-based changes to teacher practice
- Successful inquiries require in-depth support.

It also discusses some further considerations.

TPL remained a strongly transformative experience for many teachers and their students' learning

In 2013 TPL remained a strongly transformative experience for many participating teachers. Teachers used their TPL time to research, plan, trial, and reflect upon changes in their practice, informed by the needs of their students. In general, teachers were supported by the DEECD Induction Day and Support Program, their school and by collaborating with colleagues.

Teachers achieved demonstrable improvements in their knowledge, practice, and attitudes. Improvements in practice and attitudes were particularly strong.

- Practice improvements delivered stronger differentiated / personalised / individualised learning for students, more self-directed and inquiry-based learning, more collaborative teaching practices, as well as teachers being more explicit, facilitating higher order questioning and better quality discussions amongst students, and more collection and better use of evidence in the classroom
- Attitude improvements delivered stronger beliefs in the power of teaching and what can be achieved through professional learning, improved confidence in relation to content-specific areas such as literacy, numeracy and ICT, and improved confidence and motivation to continue trialling new teaching techniques and strategies based on student evidence, and to collaborate and share professional knowledge with other teachers
- Knowledge improvements delivered stronger content-specific understandings related to child development, particularly in literacy and numeracy for primary school teachers and those earlier in their careers.

These improvements for TPL teachers were confirmed by principals, students, and teacher colleagues. Teachers also dramatically improved their understanding of evidence-based inquiries, teacher-led professional learning and the importance of using evidence to inform changes in teacher practice. Almost all were collaborating and sharing their developed learnings, resources or materials more broadly across their school or beyond their school by the end of their inquiry. For these reasons it is clear that TPL advanced DEECD's *New Directions* policy of creating a high performance teaching profession, stimulating a culture of excellence and effective professional development.[15]

[15] DEECD (2013) *From New Directions to Action: World class teaching and school leadership*, p 13. Available at: http://www.education.vic.gov.au/Documents/about/department/teachingprofession.pdf

These improvements achieved by teachers led to substantial student outcomes in the target areas of teachers' inquiries. This included improvements across students' discipline/content knowledge, capabilities and skills, and attitudes and beliefs. In the case studies, improvements in student attitudes and beliefs were particularly strong, including improvements in engagement, confidence and motivation, along with improvements in their beliefs in themselves as learners, beliefs in their ability to achieve higher results and seeing the learning as applicable to the 'real world'. These improved attitudes and beliefs generally flowed through to improved discipline/content knowledge and improved skills and capabilities. Students were clear about the changes that teachers had made to their practice and described the positive impacts on their learning. On quantitative measures, teacher-reported student outcomes advanced by an effect size of between 0.6 and 1.2, including:

- Student awareness of the way they learn, 1.2
- Student capacity as independent learners, 1.1
- Student engagement, 0.9
- Student learning outcomes, 0.8
- Student behaviour, 0.6.

The structure of time release for teacher-led inquiry aligns with the practices of global high-performing education systems

A summary of the international evidence about the importance of effective professional learning to improving teacher practice and student outcomes was recently outlined in a Grattan Institute report; *Making Time for Great Teaching*.[16] It noted:

> **More effective teaching is the key to improving school education.[17] The best way to do this is through professional learning programs that seek to continually improve classroom learning and teaching.[18] … [T]eacher development regularly ignores one of the great truths of schooling: the best professional development teachers can receive is to directly help them teach their students.[19] … A big stumbling block is the failure to provide the necessary time for effective professional learning programs.[20] … High performing education systems around the world have intensive professional learning programs in schools.[21] These programs enable teachers to receive and act on continual feedback on how to better teach students.[22] These programs include: … teacher mentoring and coaching … lesson and grade groups … research groups … teacher appraisal and feedback … [and] classroom observation and feedback. Australian teachers spend considerably less time on professional learning than do teachers in the world's best systems.[23] But there is relatively little research on the optimal amount of different types of professional learning.**

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[16] Jensen, et al. (2014). Available at: http://grattan.edu.au/static/files/assets/6b005c72/808-making-time-for-great-teaching.pdf
[17] Hanushek, et al. (1998); Rockoff (2004); Hanushek, et al. (2005)
[18] Hattie (2009)
[19] AITSL (2014)
[20] Elmore (2004)
[21] OECD (2010)
[22] Fuchs and Fuchs (1985); Fuchs and Fuchs (1986); Hattie (2009); Jacob and Lefgren (2008); Gates Foundation (2010); Rockoff and Speroni (2010); OECD (2013)
[23] Jensen, et al. (2012). Available at: http://grattan.edu.au/static/files/assets/23afab6b/129_report_learning_from_the_best_main.pdf

> **We know some is better than none. And we know that effective professional learning programs are intensive. But we don't yet know precisely what the optimal amount is.**

The structure of TPL that provides time release for intensive, school-based, teacher-led, professional learning into how to better teach students aligns with the Grattan Institute's summary of good practice from high performing systems. This evaluation demonstrates that teachers involved in TPL collaborate intensively, innovate, and trial new strategies, and incorporate evidence-based feedback into their ongoing inquiry. It provides teachers with time to collaborate, research, use classroom-based evidence of student needs, and inquire into how to best respond to those needs to improve learning. It is an intensive program that not only sets up a research group, but also can include mentoring and coaching, lesson and grade groups, and teacher appraisal and feedback.

The structure also aligns with what teachers report as the most effective professional learning. Teachers report that, as opposed to other forms of professional learning, TPL provides the time to not only learn about new knowledge and skills, but to trial and implement them, reflect upon their impact, and then continue the learning. The below comment is reflective of many comments received from teachers about TPL:

> ***TPL has been such a positive and beneficial experience – both personally and professionally, for both myself and my students. It's been amazing and a privilege to have been given 'real time' to concentrate, work on and reflect on one's own teaching practice.*** **(Survey response)**

The structure of TPL also allows for teacher and school autonomy to transform teaching and improve student outcomes,[24] while Central Office provides access to quality, evidence-based resources and support[25] through the Induction Day and Support Program. In this way, it also aligns with *Victoria as a Learning Community*.

More changes in the classroom means more immediate student outcomes

When compared with previous inquiries focused on creating broader change across schools, TPL in 2013 produced more immediate changes to teacher practice. This was a result of the focus on individual teacher practice. As inquiries progressed and evidence was collected about individual student needs (such as through the profiling activity), teachers analysed the evidence together, and started responding to those needs in their practice. The expectation to select an evidence group also helped ground many inquiries in the classroom while also helping teachers to refine the scope of inquiry and focus on ensuring that their aims were achievable.

The focus groups with students demonstrated that they were aware of the changes in the teachers' practice, and could describe the impact of these changes on their learning. It was less common for teachers' improvements in knowledge or attitudes to be tested with students. That said, some student surveys that teachers had used also improved in these respects. Generally, outcomes cited by students were clearer and stronger when teachers described greater changes in classroom practice. This supports

[24] DEECD (2012) *Towards Victoria as a Learning Community*, p 13. Available at: http://www.education.vic.gov.au/Documents/about/department/learningcommunity.pdf
[25] Ibid, p 23.

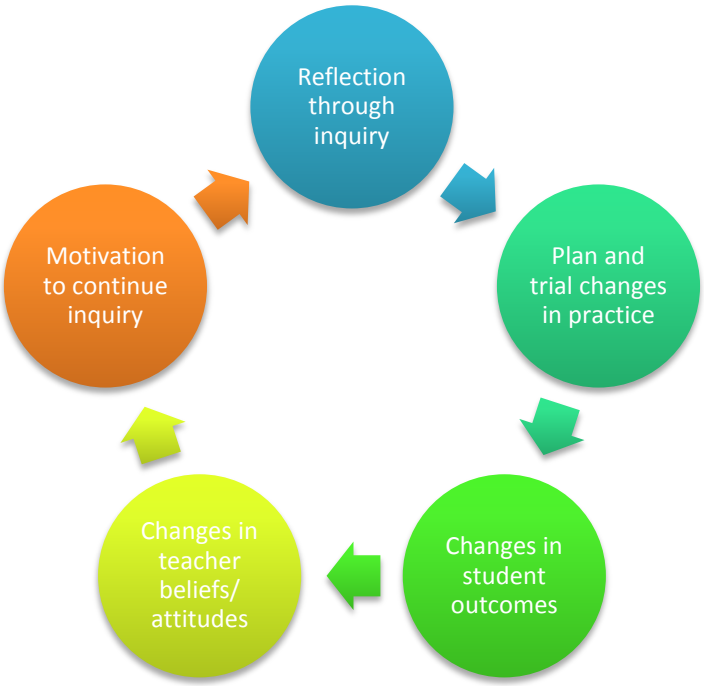
the proposition that short-term outcomes for students were generally stronger when the inquiry directly involved and affected classroom practice.

While changes in classroom practice were important, these needed to be evidence-based (discussed in more detail below). Changes in classroom practice also required teachers to reflect upon, and deepen their thinking about, their own teaching practice. In some cases this required them to challenge their existing assumptions about either their practice or their students. This reflection allowed teachers to trial multiple strategies to address a student need, rather than being fixed to one 'solution' or response. It also allowed teachers to be responsive to student needs as they arose; incorporate new ideas or practices that might not have been trialled yet at the school; and to have professional conversations with colleagues about the students and teaching practice. Reflection was prompted by discussion with colleagues, leaders, or evidence collected from students, but appeared to be most effective (or transformational) when teachers used the inquiry to go beyond what was already being used in the school. This included exploring professional reading; accessing professional learning (including the Induction Day and Support Program); accessing mentoring or coaching; visiting other schools; or, if solely within the school, trialling new observation, feedback or team teaching approaches.

It therefore appears there may be an ideal balance between reflection and the implementation of changes in practice. There were examples in the case studies where teachers were not prompted to deepen their thinking or trial different responses to the identified student need. This meant that these teachers focused solely on implementing and refining one response, such as trying to 'perfect' a particular tool or resource without exploring the importance of how such a tool or resource is implemented. However, there were also examples in the case studies in which teachers were prompted to reflect upon and deepen their thinking about their practice, without time to plan and trial changes in their practice. This meant that they were unable to reflect upon the trialled changes and how these changes were received by the students. These teachers became frustrated at understanding the theory while at the same time being unable to change their practice to affect the students' learning.

While conclusions cannot be drawn about where this ideal balance lies, many teachers nevertheless achieved such a balance. Changed practice flowed through to student outcomes. The changed teacher beliefs and attitudes often flowed once teachers saw the student outcomes that resulted from the changes in practice. Where this ideal cycle was occurring (pictured on the next page), this in-turn provided motivation to continue and progress the inquiry.

Figure 46: **The 'ideal' cycle of motivation to undertake inquiry in the case studies**



The focus on inquiries being so closely tied to individual teacher practice and classrooms means that more teachers were experiencing this 'ideal' cycle of motivation. In other words, teachers undertaking an evidence based professional learning cycle, closely tied to their classroom and observing changes in student outcomes, were more likely to also experience this 'ideal' cycle of motivation.

The focus on individual teacher practice also prevented most inquiries from relying on school authorisations or administrative changes to implement the aims of the inquiry, as the aims of the inquiry were within their sphere of influence (i.e. in their classrooms and with their students).

All case studies were linked to identified school needs, and nearly all were already sharing their learnings, but for most this was being done from a basis of (a) application of learnings; and (b) understanding of 'what works'. Teachers commented that this meant they had both practices and resources that were developed and tested, which made it easier to share with other colleagues.

More use of evidence in inquiries means more evidence-based changes to teacher practice

There was a strong focus on the collection, analysis and use of evidence in many TPL inquiries in 2013. The strong use of student-focused evidence meant that changes made in the classroom were based on identified student needs. It also meant that many teachers went on to track the impact of changes in the classroom on student outcomes. While the level of sophistication varied, all case studies had used evidence to identify student needs, and three-quarters were continuing to use classroom-based evidence of student needs and outcomes throughout their inquiry. Case studies that were using more evidence to inform their inquiry were generally assisted by their schools focus on using student data and evidence. Generally in these schools:

- Teachers started the inquiry with a higher proficiency in using evidence
- There was capacity in the school to assist the teachers with using evidence throughout the inquiry
- There was previous data or evidence that was easily accessible or available (such as online student-tracked portals)

- There was interest from the school and other teachers in what the inquiry was learning about improving the use of evidence.

Thus, there was a confluence of factors that supported these teachers to use more evidence to inform their inquiry. This was in addition to the support and encouragement provided through the Induction Day and Support Program and the resources provided (such as the Student Profiling Activity and sharing the Evidence-Based Professional Learning Cycle to help plan the inquiry). In many schools this focus on using evidence linked with a focus on providing differentiated (or individualised or personalised) student learning. This approach requires the identification of individual student needs (or profiling or establishing individual learning plans).

Teachers found the student-focused evidence that immediately informed their ongoing teaching practice the most useful. Baseline information was noted by teachers as important, but was most useful when it informed the teacher about the students' needs or current level. Similarly, tracking outcomes was noted by teachers as important, but was most useful when it could inform assessment and reporting of the students' new levels, or provide updated information about the students' changing needs. Similarly, evidence that was integrated into the teaching practice or curriculum was used more regularly, as well as being noted as most useful and easy to implement. This included formalising regular observations, feedback from students, conferencing, running records and journals. Evidence that required additional time with the students was noted as valuable but more difficult to implement. In these cases, pre-existing resources that could be implemented or adapted were appreciated by teachers, particularly where they saw these as evidence-based or with rigour behind them. This included surveys, pre-tests, interviews and videoing students.

There was more limited focus on using teacher-focused evidence, or using evidence to determine how to respond to identified student needs. It appears that a key challenge for teachers was knowing how to respond to the evidence collected. Teachers found it hard to conceptualise and respond about 'dimension two' of the Evidence-Based Professional Learning Cycle: identifying "what I need to know and be able to do in response to my students' needs". Sometimes the response in teaching practice had been determined before the application was written (and had been agreed with the school and other colleagues as the best way to respond to the student needs in order to receive approval for the application). However, examples of teachers undertaking new and further responses, or continuing to inquire into varying student needs as new evidence was collected, were seen throughout many inquiries. These actions were generally sparked by access to external expertise or evidence-bases such as through:

- Professional reading
- Professional learning (including the Induction Day and Support Program)
- Learning about evidence-based pedagogical approaches
- Networking with other teachers undertaking inquiries
- Access to external experts, mentors or coaches
- Visiting other 'high-performing' schools to observe practice.

These actions were in comparison to relying on prior school approaches, advice from peers or leaders without further investigation of other options, or relying on assumptions about how best to respond to the student need.

Those using pre-defined, evidence-based pedagogical approaches to respond to identified student needs were often clearer about how to respond to student needs in an effective way; how to research and implement that response; and how to access support in relation to those approaches. These teachers were generally more confident and had greater clarity throughout their inquiry. Often these approaches

included more evidence collection with the students, and provided pre-existing resources that could be adapted and implemented more easily.

While identifying student needs was the strongest use of evidence, the weakest was using it to measure changes in teaching practice. Most reflection and analysis of teacher practice occurred through discussions with colleagues. This was assisted with evidence particularly where teachers taught as a team, but also where they discussed and compared responses to the identified student needs. There was a more limited focus on videoing practice, peer observation or the e[5] Instructional Model than in prior years. Some teachers desired more access to research databases, pools of developed evidence-based resources, networks of high performing teachers or schools based on particular areas of student need (or areas of inquiry), or access to previous TPL inquiry's outcomes, resources or participants.

The evidence collected as part of this evaluation through the student focus groups confirmed the changes made to the classroom by the TPL teachers had addressed the identified student needs. In almost all cases the student feedback matched the improvements reported by the teachers. In some limited cases the students were more vocal about other aspects of classroom practice that impacted on their learning (i.e. other student needs that existed and had not been the focus of the inquiry), which could be a further area of investigation by future evaluations.[26] Overall, in every case study, students were clear about the changes that the teacher had made in their practice, and were positive about the resulting improvements for their learning. Along with the other evidence collected as part of this evaluation, it is clear that the teacher-led TPL professional learning in 2013 was closely tied to improving their students' learning, and was successful in its aims.

Successful inquiries require in-depth support

Support continued to be essential for teachers to undertake successful TPL inquiries. Important sources of support included (each of these is discussed in more detail below):

- Access to external expertise or evidence
- School leadership and administrative support
- Collaboration with other teachers.

Access to external expertise or evidence

Sources of external support (such as the professional learning provided through the Induction Day and Support Program) were important to provide learning about how to undertake the inquiry, but additional professional learning was required by many into their area of focus. In-depth discussions that challenged assumptions and prompted teachers to more deeply consider their practice beyond what was already practised at the school generally required access to external support or external expertise, or teachers being self-motivated to access external evidence sources. Such evidence sources included the Induction or Support Days, but also more individualised coaching, leader mentoring, or teacher-directed access to professional reading, research on the internet, other professional learning programs, or schools visits.

[26] The student focus groups examined the changes in teacher practice that had been implemented, and their impact on student's learning. They did not examine whether the student thought the needs being addressed by the teachers' inquiry were the most important needs to be addressed.

School leadership and administrative support

School leadership support remained critical. In 2013 all case studies enjoyed good leadership support, with many noting the value of principals (or their delegates) attending the Induction Day. All case studies were linked to identified school needs, and were balancing and linking this with inquiring into their individual needs as teachers. Reflecting the current pedagogical and policy trends in the education system (and therefore many schools' priorities), many inquiries were focused on individualised learning, self-directed learning, inquiry-based learning, collaborative teaching practices, numeracy, and/or literacy. Teachers are inherently subject to the priorities around them, but a strength of TPL remained the autonomy that teachers (and schools) experienced to identify the most important needs of their students and the most effective responses in their context. It also included teachers examining their individual teacher-practice needs. This represented ownership and garnered engagement and motivation by teachers and the school itself. This evaluation shows that the teachers' inquiries were strongly connected to improving their students' learning.

School leadership and administrative support also remained important for teachers accessing the TPL time in a manner that was most effective for their inquiries. Teachers that had the support of peers, parents and students also noted these as useful for undertaking their inquiry.

Collaboration

Another very important source of support was collaboration. All case studies reported that working as a team was one of the most important enablers of their learning. In all case studies where multiple teachers had been approved within the school they worked as a team. Teachers were also often sharing their learnings with other colleagues in the school and beginning to collaborate with them on the inquiry's area of focus, such as by incorporating their feedback. Some were also collaborating with teachers in other schools. The support provided by connecting with other teachers inquiring into practice was also reflected by the value teachers placed on the networking provided through the Support Program. Some teachers noted this networking was the best part of the Program, while some also suggested it should be more targeted such as through groupings for the program being based on student needs (areas of focus) and/or split between primary and secondary school teachers. Logically, networking can become collaboration more easily when the student needs being investigated are similar.

Further considerations

The experience of TPL teachers in 2013 highlighted the importance of approving inquiries in the year prior, as well as starting the attached professional learning earlier. The delay in approvals and the Induction Day meant many inquiries were delayed or that teachers were unclear how to structure their inquiry as the school's timetabling was being arranged. It also highlighted the importance of a robust application and selection process to ensure that similar applications from the same school are judged similarly, to ensure coherence in those that are accepted and those that are not. There was also less focus early on in the Induction Day and Support Program on refining inquiries to be specifically focused and achievable (for example, in previous years teachers were asked to define a specific Inquiry Question which helped to refine and focus the scope of inquiry). The Support Program was also not rated as strongly as a support in comparison to previous years. It appears that collectively a number of factors contributed to this result, including the delay, the groupings of participants, the online component, the level of support between days, and the ability of the facilitators to meet the specific needs of various inquiries (e.g. special schools).

In the formulation of future policies and/or programs, other considerations that arise from the evaluation of TPL 2013 include:

- The role of accountability regarding the access and use of days by teachers.[27] Some limited examples were heard in which teachers were not receiving the days as intended by TPL. There were many more examples in which teachers were not receiving the days in the manner they thought would be most useful for their inquiry or aligned with the structures previous TPL evaluations have found to be most effective (i.e. whole days scheduled in advance, at the same time as other teachers undertaking an associated inquiry, with regular replacement teachers or a reduced load).
- Access to expertise regarding how to respond to identified student needs. Access could be facilitated through groupings based upon the student needs and the year levels being targeted by the inquiry. This could include the fostering of partnerships and networking regarding the learnings of previous TPL inquiries, including their outcomes, resources developed and the teachers who undertook them.[28] This could also extend for schools undertaking teacher-directed inquiry for the first time being linked to similar schools that have undertaken it several times and can provide advice about how to structure it well.
- The potential benefits of creating additional flexibility. This could include a grants pool for teachers to access external support in the area of inquiry (particularly in smaller regional schools with smaller professional learning budgets); the ability for teachers to allocate some of their days to release other teachers to assist their inquiry; the ability to distribute days over two years; and, the availability of the program to all teachers.
- Equity in access, as it appears that many schools may never have accessed TPL, while others accessed it multiple times. A high proportion of schools accessed TPL multiple times across several years. While this was powerful for embedding a culture of professional learning and teacher-led inquiry, it meant many schools were not accessing TPL year after year. In total, 98 schools were involved in 2013 and 82% of respondents indicated their school had had TPL in the past. With 1,573 schools in Victoria it is likely that many schools have not accessed TPL for several years, or have never accessed TPL.
- The benefits of providing pre-existing evidence collection tools or examples or networks related to previous inquiries into similar areas. The Student Profiling Activity provided through the Induction Day and Support Program was powerful for many teachers' inquiries, strongly influencing their collection of evidence about student needs. Standardised tools, based on areas of inquiry and year levels, could be provided to teachers to further help them identify needs and measure changes in outcomes. This could be particularly powerful if provided to teachers in the year prior, so that they had standardised data (beyond the school-based datasets of NAPLAN and On Demand) that could be compared year-on-year (i.e., between student cohorts by the end of Term 4). Linking teachers new to undertaking an inquiry with teachers who have already inquired into similar areas in prior years, or providing exemplar examples of prior inquiries, was also suggested by teachers.
- With the new Teacher Led Research targeted towards high performing teachers, there is potentially now limited availability of teacher-led inquiry programs for newer or younger teachers. The evaluation has seen many teams that combine both more experienced and less experienced teachers in very successful collaborations. The preference for high performing teachers may also affect schools that have not undertaken teacher-led inquiry programs before and thus may not

[27] DEECD (2012), p 19, which states that the Central Office has a role to play regarding accountability, complementing school autonomy.
[28] Ibid, p 25, which states that the Central Office has a role in fostering partnerships.

know how to write their applications to target the requirements of the program as well as other schools which have been successful in the past.

- How teacher-led research or inquiry can be more embedded within more schools, including their professional development processes and timetable scheduling.

Conclusion

This final report for the evaluation of the 2013 cohort of TPL provided findings on:

- The TPL teachers, their schools, and the use of the TPL time
- The use of evidence, including identifying student needs; identifying professional learning needs; measuring changes in teaching practice; measuring changes in student outcomes; measuring changes in the wider school community; and developed knowledge and skills for collecting and using evidence
- The changes in teacher discipline/content knowledge; practice/pedagogy; and attitudes and beliefs
- The changes in student discipline/content knowledge; capabilities and skills; and attitudes and beliefs
- The impact on the wider school community
- Critical supports for teachers undertaking inquiry, including the Induction Day; Support Program; practical resources; and collaboration
- Other findings, including overall facilitators and hindrances for TPL success; accountability for access to TPL time; and teacher characteristics for independent evidence-based inquiry.

This report showed that, based on the most common demographic information, the average TPL teacher was a female Accomplished Teacher, aged between 25 and 34. She took her TPL time as regular days built into the timetable and collaborated with one to three other TPL teachers in the school. She was from a metropolitan, low-SES, primary school, which had had teachers access TPL before.

This report included an in-depth analysis of the evidence used by teachers to underpin their professional learning inquiry. It found that teachers most used evidence to identify student needs, followed by using it to measure changes in student outcomes. This was often related to providing more differentiated learning for the students. Teachers were assisted by their school having a focus on using data to inform teaching, and by the practical student profiling activity provided at the TPL Induction Day and Support Program. Three-quarters of case studies were using student-focused evidence collected in their classroom, designing and using multiple evidence sources, and/or collecting multiple rounds of evidence across the duration of their inquiry. One-quarter relied on broader school data sets such as NAPLAN or On Demand. Using evidence to identify professional learning needs or measuring changes in teacher practice was more limited.

The improved collection and use of evidence to inform changes in teacher practice was a substantial learning for many teachers undertaking TPL in 2013. Many teachers were planning to embed the changed practice into their ongoing planning and assessment, albeit more efficiently now that they had developed skills and materials. The largest obstacle to collecting and using evidence was having the time.

In the case studies, teachers described in detail the changes they had made to their practice, and the new knowledge and skills they had gained through their TPL inquiry. In 2013, TPL remained a strongly transformative experience for many participating teachers. Teachers used their TPL time to research, plan, trial, and reflect upon changes in their practice, informed by the needs of their students. Teachers achieved demonstrable improvements in their knowledge, practice, and attitudes. Improvements in practice and attitudes were particularly strong.

- Practice improvements delivered stronger differentiated/personalised/individualised learning for students, more self-directed and inquiry-based learning, more collaborative teaching practices, as well as teachers being more explicit, facilitating higher order questioning and better quality discussions amongst students, and more collection and better use of evidence in the classroom

- Attitude improvements delivered stronger beliefs in the power of teaching and what can be achieved through professional learning, improved confidence in relation to content-specific areas such as literacy, numeracy and ICT, and improved confidence and motivation to continue trialling new teaching techniques and strategies based on student evidence, and to collaborate and share professional knowledge with other teachers
- Knowledge improvements delivered stronger content-specific understandings related to child development, particularly in literacy and numeracy for primary school teachers and those earlier in their careers.

These improvements for TPL teachers were confirmed by principals, students, and teacher colleagues. Teachers also dramatically improved their understanding of evidence-based inquiries, teacher-led professional learning and the importance of using evidence to inform changes in teacher practice. Across the duration of TPL there was a 26-fold increase in the proportion of teachers feeling 'very confident' to undertake evidence-based inquiry into their practice, from 2% to 52%, as shown in Figure 35. By the end of TPL nearly all respondents (98%) were confident or very confident to continue such inquiry into their teaching practice, and over four in five were 'very motivated' to:

- Trial new techniques and strategies in their classroom (98%, compared to 59% prior)
- Discuss and share professional knowledge with other staff (93% compared to 63% prior)
- Collect, analyse, and use student evidence to modify their teaching practice (85% compared to 35% prior)
- Analyse student learning evidence together with other staff (80% compared to 45% prior).

Almost all were also collaborating and sharing their developed learnings, resources or materials more broadly across their school or beyond their school by the end of their inquiry.

These improvements achieved by teachers led to substantial student outcomes in the target areas of teachers' inquiries. This included improvements across students' discipline/content knowledge, capabilities and skills, and attitudes and beliefs. In the case studies, improvements in student attitudes and beliefs were particularly strong, including improvements in engagement, confidence and motivation, along with improvements in their beliefs in themselves as learners, beliefs in their ability to achieve higher results, and seeing the learning as applicable to the 'real world'. These improved attitudes and beliefs generally flowed through to improved discipline/content knowledge and improved skills and capabilities. Students were clear about the changes that teachers had made to their practice and described the positive impacts on their learning. On quantitative measures comparing the results of the pre and post surveys, teacher-reported student outcomes advanced by an effect size of between 0.6 and 1.2,[29] including:

- Student awareness of the way they learn, 1.2
- Student capacity as independent learners, 1.1
- Student engagement, 0.9
- Student learning outcomes, 0.8
- Student behaviour, 0.6.

This report also discussed how the evaluation showed that:

- TPL remained a strongly transformative experience for many teachers and their students' learning

[29] Hattie (2009) notes the average effect size of improvement initiatives in education is 0.4, although caution should be had interpreting these results as they are based on teacher self-reporting of student outcomes from a pre and post survey.

- The structure of time release for teacher-led inquiry aligns with the practices of global high-performing education systems
- More changes in the classroom means more immediate student outcomes
- More use of evidence in inquiries means more evidence-based changes to teacher practice
- Successful inquiries require in-depth support.

This report went on to discuss the impact of the delay in the approval of TPL in 2013, and other considerations that are relevant to the formulation of future policies and/or programs.

Finally, it is clear from the multiple sources of evidence collected as part of this evaluation that overall the teacher-led TPL professional learning in 2013 was closely tied to improving students' learning, and was successful in its aims. Synergistiq wishes to thank the teachers and school leaders for their time contributing to this evaluation.

Appendix A: Evaluation questions

Use of evidence

- To what extent have teachers:
    - Connected their professional learning needs to identified student needs?
    - Used evidence to:
        - Identify student needs?
            - What are the ways teachers assess/profile student learning needs?
            - What types of data do participants collect, and how do they collect it?
            - How do participants analyse the data (including processes, and whether this is done collaboratively)?
            - What supports the assessment/profiling of student needs and what are the challenges in doing this?
        - Identify their professional learning needs?
            - What are the ways in which they assess their own needs?
                - What tools and processes are used to measure teacher capabilities and identify teacher professional learning needs?
                - Against which benchmarks do they compare their abilities and needs?
            - What is it that prompts teachers to consider their practice? (eg; teachers look to teaching strategies for solutions and not necessarily at themselves)
        - Measure changes in their teaching practice?
        - Measure progress on student outcomes?
        - Measure or plan to measure the impact of their TPL investigation on the wider school community?

Changes in teacher skill and practise

- In what ways and to what extent has teacher skill and practise changed as result of TPL?
- To what extent have these changes been embedded?

Impact on students

- What is the evidence that students are aware of changes in teaching practise arising from TPL?
- What is the evidence that teacher learning through TPL improved outcomes for students?

Impact on wider school community

- What impact has the TPL investigation had on other teachers at the school?
- What is the impact on school culture?
- How have teachers collaborated with other teachers to extend their collective learning?

Further improvements to TPL

- What are the facilitators and obstacles that influence the success of TPL?
- How can TPL be further improved?

Appendix B: Project Logic

Context: The Department of Education and Early Childhood Development (DEECD) recognises that practitioner–led research that encourages teachers to reflect upon and try out new ideas to support student learning fosters a culture of excellence which is seen as necessary to build the quality of the teaching profession. Teacher Professional Leave (TPL) provides time release for teacher–led inquiry into teacher practice, to enable teachers to respond to the question, *"based on the needs of my students, what do I need to learn and do differently in my teaching practice to improve the learning outcomes for my students?"* TPL is informed by Helen Timperley's research regarding the evidence-based professional learning cycle and emphasises the role of collaboration between teachers to maximise professional learning outcomes for TPL participants, their colleagues, and students. CRT funding is available for a minimum of 30 days to a maximum of 40 days per teacher to undertake TPL. The leave needs to be taken within the one calendar year.

Inputs	Activities (Program Level)	Outputs	Short Term Outcomes	Medium Term Outcomes	Long Term Outcomes
CRT funding – $2.5million. Evidence-based professional learning model *e[5] Instructional Model* TPL support program provider Selection Provider Evaluation Findings TPL website / resources	Online application and selection process Distribution of CRT funding Induction Day TPL Support program – including 3 face-to-face program days and online support	Number of teachers selected to participate in the program: 198 Number of schools involved: 96 Number of TPL days allocated: 7587 total, average of 38 days per participant. Number of TPL days used Number of principals and TPL teachers participating in the Induction Day Number of principals and TPL	TPL teachers increase their understanding of the importance of using evidence to meet their own needs and the needs of their students. TPL teachers identify and use evidence to: • Profile their students and identify student needs • Identify their professional learning needs in response to the identified needs of their students • Monitor the impact on student learning/outcomes of the changes they make to their practice TPL teachers understand and use an instructional model to discuss, reflect and examine their own practice. TPL teachers understand and use the Evidence-Based Professional Learning Cycle to discuss, reflect and examine their own practice. TPL teachers' perceptions of their practice, in light of the students needs, are challenged TPL teachers pursue an individual teacher practice inquiry, and align it to school/network needs TPL teachers trial and apply learnings within their practice TPL teachers strengthen collegial relationships	Teachers build on the short term outcomes by refining their skills, increasing their confidence and motivation, using evidence all at higher levels as time progresses. This includes: • TPL teachers continue to refine and apply learnings • TPL teachers continue to identify and refine their use of evidence • TPL teachers continue to use an instructional model to discuss, reflect and examine their own practice • TPL teachers continue to use the Evidence-Based Professional Learning Cycle to discuss, reflect and examine their own practice. • TPL teachers embed learnings in practice • TPL teachers share their learnings with other teachers.	Improved teacher skills and practise Students have better learning outcomes (Note: long term student outcomes are subject to a number of other influences)

		teachers participating in the TPL support program (on-site and online)	Non-TPL teachers are engaged in conversations about teacher practice TPL teachers use the allocated days in pursuit of their inquiry Student outcomes: • Improved student learning outcomes • Improved student engagement • Student awareness of teachers' change in practice • Greater student awareness of the way they learn and increased student capacity as independent learners	• Improvements in teaching quality are perceived by students • A professional learning culture is strengthened • Deepening of the short term student outcomes	

Assumptions:

- Teacher practice changes affect student engagement and wellbeing, and student learning outcomes.
- Improved student engagement and wellbeing supports improvements in student learning outcomes.
- Teachers are interested in TPL.
- Some teachers form into teams to enable collaboration.
- All teachers can apply for TPL; however, it is more likely that teachers interested in examining their practice will develop applications that are successful.
- Teachers who are motivated by their participation in TPL will influence the motivation and professional learning aspirations of other teachers.
- Teachers generally feel a professional responsibility to share their TPL learning.
- The communication and application process made clear to participants and principals TPL's focus on individual teacher practice.
- TPL and DEECD are responsive to evaluation findings.
- Principals provide ongoing support for TPL and facilitate access to TPL
- Allocated days are used for TPL inquiry

Related to the evidence-base

- The Evidence-Based Professional Learning Cycle assists teachers to improve their teaching practice, improve student outcomes and identify their ongoing professional learning needs.

Related to support

- TPL Support Program, including face to face and online components, and the Induction Day guide the teachers' TPL inquiry.
- The placement of the Induction Day orients participants for a more successful TPL experience.
- The involvement of principals in the Induction Day and Support Program leads to a more successful TPL experience.
- Participants engage their principals, colleagues and parents to explain the value of TPL.
- Principals value TPL, and are supportive of TPL teachers.
- Principals value TPL, and are supportive of TPL teachers.
- Principals value the DEECD frameworks.
- Positive TPL outcomes engender more support for TPL within the school leadership.
- Schools will provide additional support as required – for example professional learning and resources.

Appendix C: Stratified random sampling for case studies

School type

School type	Number of schools in that category	Percentage	Proportion of 12	Rounded – Proposed number of schools to be selected
Pri/Sec	1	1%	0.125	**1**
Primary	65	68%	8.125	**7**
Secondary	27	28%	3.375	**3**
Special	3	3%	0.375	**1**
Total	96	100%	12	**12**

Socio-Economic Status

Socio-economic Status	Number of schools in that category	Percentage	Proportion of 12	Rounded - Proposed number of schools to be selected
Higher SES	41	43%	5.13	**5**
Lower SES	55	57%	6.88	**7**
Total	96	100%	12	**12**

Number of TPL participants per school

Number of TPL participants at school	Number of schools	Number of participants	Spread based on number of participants		
			Percentage of participants	Proportion of 12	Rounded – Proposed number of schools to be selected
1	44	44	22%	2.67	**3**
2	22	44	22%	2.67	**3**
3	17	51	26%	3.09	**3**
4 or more	13	59	30%	3.58	**3**
Total	96	198	100%	12	**12**

Metro, Remote, Rural

ASGC-RA classification	Number of TPL Participants	Percentage	Proportion of 12	Rounded - Proposed number of site visits	Alternative proposed number of site visits
Major Cities	117	59%	7.09	**7**	7
Inner Regional	77	39%	4.67	**5**	4
Outer Regional	4	2%	0.24	**0**	1
Total	198	100%	12	**12**	12

Region

Region	Number of participants	Percentage	Proportion of 12	Rounded - Proposed number of site visits
Eastern Victoria	46	23%	2.79	**3**
Northern Victoria	44	22%	2.67	**3**
Southern Victoria	56	28%	3.39	**3**
Western Victoria	52	26%	3.15	**3**
Total	198	100%	12	**12**

Appendix D: Bibliography

AITSL (2014) '*Essential Guide to Professional Learning series'*. Available at: http://www.aitsl.edu.au/professionallearning/resources.html#Essential

DEECD (2010) *Coaching Teachers in Effective Instruction*. Available at: http://www.education.vic.gov.au/Documents/about/programs/archive/coachteach.pdf

DEECD (2012) *Towards Victoria as a Learning Community*, p 13. Available at: http://www.education.vic.gov.au/Documents/about/department/learningcommunity.pdf

DEECD (2013) *From New Directions to Action: World class teaching and school leadership*. Available at: http://www.education.vic.gov.au/Documents/about/department/teachingprofession.pdf

Elmore, R. F. (2004) *School Reform From the Inside Out: Policy, Practice and Performance*, Harvard University Press

Fuchs, L. S. and Fuchs, D. (1985) *A quantitative synthesis of effects of formative evaluation on achievement*, 69th Annual Meeting of the American Educational Research Association

Fuchs, L. S. and Fuchs, D. (1986) 'Effects of systematic formative evaluation: A meta-analysis', *Exceptional Children*, 53(3), p 199-208

Gates Foundation (2010) *Learning about teaching: Initial Findings from the Measures of Effective Teaching Project*, MET Project

Hanushek, E. A., Kain, J. F., O'Brien, D. M. and Rivkin, S. G. (2005) *The Market for Teacher Quality*, NBER Working Paper Series No. 11154

Hanushek, E. A., Kain, J. F. and Rivkin, S. G. (1998*) Teachers, Schools, and Academic Achievement*, NBER Working Paper No. 6691, National Bureau of Economic Research

Hattie, J. (2009) *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement*, Routledge

Jacob, B. and Lefgren, L. (2008) 'Can principals identify effective leaders? Evidence on subjective performance evaluation in education.', *Journal of Labor Economics*, 26(1), p 101-136

Jensen, B., Hunter, A., Sonneman, J. and Burns, T. (2012) *Catching up: Learning from the best school systems in East Asia*, Grattan Institute. Available at: http://grattan.edu.au/static/files/assets/23afab6b/129_report_learning_from_the_best_main.pdf

Jensen, B., Hunter, J., Sonnemann, J. and Cooper, S. (2014), *Making time for great teaching*, Grattan Institute. Available at: http://grattan.edu.au/static/files/assets/6b005c72/808-making-time-for-great-teaching.pdf

OECD (2010) Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States, from http://www.oecd.org/pisa/46623978.pdf

OECD (2013) Education at a Glance 2013, OECD Publishing, accessed 5 July 2013, from http://www.oecd.org/edu/educationataglance2013-indicatorsandannexes.htm

Rockoff, J. E. and Speroni, C. (2010) 'Subjective and Objective Evaluations of Teacher Effectiveness', American Economic Review, 100, p 261-266

Rockoff, J. E. (2004) 'The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data', American Economic Review, 94, p 247-252

Timperley, H. (2009) *Using Evidence in the Classroom for Professional Learning,* paper presented to the Ontario Education Research Symposium