



MINISTRY OF EDUCATION  
TE TĀHUHU O TE MĀTAURANGA

## **Implementing inquiry:**

What can be learned from the Round One  
Teacher-led Innovation Fund (TLIF) projects?

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# 1.

# Introduction

This report presents the findings of a research project carried out by the New Zealand Council for Educational Research (NZCER) for the Ministry of Education (MOE) on the Round One Teacher-led Innovation Fund (TLIF) inquiries. The purpose of the TLIF is to provide funding for groups of teachers to develop innovative practice in order to improve learning outcomes, particularly for Māori students, Pasifika students, those with special education needs and those from low socioeconomic backgrounds. The purpose of this research is to capture important aspects of inquiry from the perspective of the TLIF project monitors and to observe how these play out in the Round One TLIF projects.

## Research design

The research involves case study methodology as this makes it possible to address the ‘what’, ‘how’ and ‘why’ of the situation (Yin, 2003) in each inquiry, to provide the “force of example” as a source of understandings; and to “close in on real-life situations and test views directly in relation to phenomena as they unfold in practice” (Flyvbjerg, 2006, p. 235).

## What were the research questions?

The overarching research question is: What factors have contributed to the initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?

The sub-questions are:

- What ways of working with external ‘experts’ have contributed to initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?
- What ways of engaging with community (including working with whānau and being culturally connected) have contributed to initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?
- What ways of using an evidence base to inform implementation have contributed to initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?

- What ways of sustaining an inquiry with a changing team have contributed to initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?
- What other practices, ways of working or factors have contributed to initiation of TLIF projects that have yielded useful insights, or appear to be on track to do so?

## Who was involved in the research and what did it involve?

I interviewed the five MOE appointed TLIF monitors responsible for supporting and reviewing the 40 TLIF projects that began in July 2015.<sup>1</sup> The Ministry had shared four themes that had already emerged from the TLIF Monitor meetings as being important in teacher-led inquiry. These themes related to the ways TLIF teams: worked with external experts; engaged with the community; used an evidence base to inform implementation; and sustained inquiry with a changing team. As part of the interviews I asked the TLIF monitors about each of these themes (and any others they considered to be important in effective teacher-led inquiries). I also asked them to recommend any inquiries they considered especially strong in relation to one or more of these themes, and it was from this pool of inquiries that I selected inquiries to include in the research. My selection of inquiries was based in the first instance on ensuring coverage of the themes, and in the second ensuring a range of school types. As the research was carried out early in the life of the inquiries, the case studies provide early insights into initiating practices in promising projects, largely without yet line of sight to outcomes.

The six inquiries with teachers who agreed to be part of the research are shown in Table 1 below, along with their schools and the themes that the TLIF monitors had recommended them for.

TABLE 1 **Inquiries and schools**

Themes	Schools	Inquiries
<i>Ways of working with the external 'expert'</i>	Alfriston College	The impact of whānau-based groupings and integrated learning for the learning and achievement of students in Years 9–10.
	Waimairi School	The impact of building: pedagogical knowledge, culturally responsive practice and metacognitive strategies on achievement in mathematics for Māori and Pasifika students.
<i>Ways of engaging with the community</i>	Hauraki Plains College	The impact of collaborating with community in the contexts of agriculture, Māori cultural studies and science around a real 'wicked' problem.
<i>An evidence-based, dynamic approach</i>	Westlake Boys' High School	The impact of marae-based learning on the engagement and achievement of priority learners.
<i>Shared ownership</i>	Berhampore School Newtown School Brooklyn School	The impact of co-teaching on pedagogical practice to improve achievement in mathematics for priority learners.
	McCauley High School	The impact of flipped classrooms on the outcomes of priority learners in senior maths, social sciences, chemistry, te reo and junior social studies.

Two inquiries are set in the primary school context and four are set in the secondary school context. Five of the six inquiries are located in one school only (although several of these began with the intention of collaborating across schools) and one involves collaboration across three schools. In total, teachers from four primary schools and four secondary schools were involved in the research.

<sup>1</sup> The interview questions focused on any factors when initiating inquiries that the monitors considered to have contributed to fruitful Round One TLIF inquiry projects.

I took advice from the lead teachers in each inquiry on whom in their team to invite to be part of the research. I carried out face-to-face interviews with 22 teachers, two principals and two deputy principals either individually, in pairs or in small groups depending on the availability and preference of those involved.

### **Overview of the report structure**

The report is structured according to the four main themes identified by the TLIF monitor team as important when implementing an effective teacher-led inquiry. Each chapter begins with a summary of the TLIF monitors' observations about the theme as they have observed it playing out in the Round One TLIF projects they were responsible for monitoring. This is followed by either one or two small case studies, or vignettes, that exemplify the theme in question in the context of a productive inquiry. Chapter 2 is on engaging with external experts; Chapter 3, on engaging with the community; Chapter 4, on the use of an evidence base to inform implementation; and Chapter 5, on sustaining inquiry with a changing team. The final chapter looks across the four themes and considers them in relation to each other, as well as offering some suggestions for next steps.

## 2.

# Working with experts

The TLIF monitors observed that when teachers drew on external expertise they had better inquiry processes and outcomes because experts provided skills or knowledge that the teachers did not have, and an outside perspective.

You can certainly see when monitoring the projects, which have external experts working on the project—the quality, particularly of the data analysis. Those schools that have a relationship with an expert have analysed it better. They're clearer about what they want from that data ... They are able to discuss precisely what they gained from their data and then why they've chosen their inquiry question so you can see a better analysis around that.

The monitors observed that different teams needed different amounts, and different types of external support. The one area of expertise that monitors observed nearly *all* teams benefited from was expertise in inquiry. Monitors also observed that while expertise in the *topic* that was the focus of inquiry was important teachers found it easier to identify and meet *this* need than the need for inquiry expertise. In other words, while teachers typically appreciated the need for expert support in the topic they were investigating (e.g., enhancing written language) they were generally less aware that there are skills they require to successfully undertake an inquiry (e.g., refining inquiry questions, determining measures that would enable them to know if their inquiry had been successful or not). Those who did not understand the need for inquiry expertise tended to see their project in terms of implementing 'business as usual' professional development activities. Sometimes contracted experts were able to support the teachers to design their projects as inquiries as well as provide expertise in the area they were seeking to improve, but both components appear necessary for the projects to succeed.

They [the expert] have to have an understanding of really good inquiry and forms of data gathering.

They really need someone who has expertise in the *topic* of inquiry ... who can talk them through problem solving, critiquing practice, exploring a range of options, and creating new possibilities and innovation. If the expert only has a *surface* knowledge of the topic then that is not going to happen to the extent it is required for rigorous inquiry. Instead experts and teachers risk bringing their pre-conceived ideas to the table.

Likewise, it was important that experts were up to date with the latest research and had the capacity to recognise and support innovation in their area of expertise, particularly for a fund with a focus on innovation, such as TLIF.

Innovation doesn't want you sitting back on something you did ten years ago.

When seeking experts, it was important for teachers to consider carefully the type of help they needed in running their inquiry, and to approach people who had the capacity to meet those needs.

The clarity schools have got around *who* they are going to use as experts, *why* they're going to use them and the *relationship* between the identified need of the students, or the practice needs of the teachers, and the skills and expertise of that expert is important.

The stronger teams had been able to get this 'match' right.

They've actually made a link between the student data and the project they're going to run, and the expertise they are going to seek or have already sought.

The stronger teams were also able to reflect on their changing needs in response to evidence and respond to what this was telling them by seeking more of the same or different expertise to meet their needs. This ability to change direction in response to inquiry evidence is a theme I cover later in this report.

Another interesting observation is how they change and adapt their expertise as the project grows.

Rather than thinking we're just going to have this one expert, it's monitoring the impact of the expert as the project progresses. At certain times they may need to access someone else, and it may not be from the same organisation, so they need to be clear about who's out there to help them.

However, not all teachers understood the types of expertise they were likely to need in running their inquiries and others had difficulty finding the expertise they needed.

Some schools with high internal capabilities knew what their needs were and they knew where to find expertise to meet them. But if you don't have those skills it's hard to get them. People don't know who to ask or they don't understand what the expert can actually do for them.

It was easier for teachers in urban centres with connections to universities or other educational organisations than teachers working in smaller rural areas to find experts to work with.

Teachers in the city, doing Master's papers or with connections to the university knew where to go [to find experts].

How will you get access to an academic expert in inquiry when you're sitting in Hawera or Tolaga Bay?

Some monitors saw this difference as an equity issue. Others worried that some of the schools with the "greatest innovation" could be put off from applying for the fund, or be unsuccessful in their application, because they were unable to find experts to work with.

Monitors observed that teachers tended to get off to a quick start and to work efficiently with external experts when they had a prior working relationship (because they already knew each other and had established ways of working together) or involved the experts in the process of shaping the inquiry question and design at the proposal writing stage. This shared work meant that they had started to build relationships and a common understanding of the inquiry by the time it was accepted. Those who did not work with the experts until the proposal had been accepted "are sort of on the back foot".

However, for expert involvement at the proposal writing stage, schools had to be willing to pay for experts' time to meet with teachers, or experts had to be willing to work without being paid, without any certainty that the inquiry would be funded. Monitors considered this to be one of the main reasons why many of the proposals had been written without the input of external expertise. Several suggested that funding be available to cover the costs of teachers meeting with their experts at the proposal writing stage as a means of ensuring strong inquiry questions and designs from the outset.

While monitors considered the inclusion of external expertise to be essential, all emphasised the importance of the inquiry question being owned and led by the teachers. As one said, “It is the *Teacher Led Innovation Fund*”. Some of the inquiry proposals appeared to be designed and written by the experts rather than the teachers. These proposals tended to be closely aligned with the research agenda of the experts who had written them. Some monitors found that when the inquiry question and design had been developed by the experts, teachers were less invested in the project and struggled to write milestone reports because they did not own (or even fully understand) the inquiry as designed or shaped by the expert.

Inquiries were productive when based on questions that deeply mattered to the *teachers* involved, questions they may have been curious about, or puzzling over for many years, and when the expert was able to mentor the teachers to lead the inquiries. Often they were highly context specific—questions that had emerged from their experiences working with particular students and *whānau* from particular communities, located in particular places.

When it works well the expert becomes kind of part of the team. They sit down alongside them and help them unpack what it is they want to do. Often the expert will help them narrow the focus, they’ll help them make it more manageable, they’ll assist with the data that’s likely to help them progress the project. They’re a bit of a mirror. What that expert is doing is building up the internal capability of the team to do this work but not doing it for them.

The expert has to be in that mentoring role which is: knowing when to sit back, when to be more proactive, when to provide quite a lot of scaffolding and guidance, and when to let them go on their own.

What follows are two vignettes—one based in a secondary school and one in a primary school—in which the experts worked with teachers in a mentoring role.

## **Inquiring into authentic learning at Alfriston College**

The inquiry at Alfriston College involved exploring the impact of more tightly integrating the junior school programme of learning across subjects. The inquiry was linked with the junior school redevelopment project that was already underway at the school when the TLIF funding became available. The junior school redevelopment project involved five *whānau* groups of four teachers from different learning areas working together to deliver an integrated curriculum to groups of about 60 students. The TLIF funding enabled them to “do the project better” by employing external expertise and enabling teachers to be released from their classrooms to work collaboratively on the inquiry.

### **How did the teachers choose experts and work with them?**

Because of the importance of getting the right expertise, the project leaders took care and time in deciding who to approach. They began by thinking very carefully about what it was they wanted to achieve and what support they would need to enable them to do so in terms of knowledge, skills, ways of working and ‘fit’. They chose two experts with whom they had prior relationships. One was a researcher who had worked with the school on and off since it opened. She had worked closely with the school as a mentor in 2007 on a 2-year TLRI project, and had continued to offer encouragement and support in less formal ways since. She understood the nature of the school and what the teachers were trying to achieve.

She gets our school which is really important because we’re not a usual school. She gets us and we know that. We really value what she’s given us over the years.

The other expert was a facilitator in Modern Learning Environments (MLE) known by one of the project leaders. However, because they had not worked with her before, they went through an extended consultation process to ensure the ‘fit’ was right. This process started with a meeting in which the team

leaders described their project and what they were hoping to achieve. The project leaders described this meeting as being a bit like a job interview in which both parties had the opportunity to learn about and consider the potential working relationship.

In the consultation process it is an interview and you need to be clear about, 'This is where we're at and this is where we want to go.' And they need to prompt you and ask questions to make sure that they get you. It's important to be very clear about what you need or think you need so that they can identify if they can help you.

This was followed by another half-day meeting with the whānau team leaders and the principal. There were further conversations following this meeting and then the MLE facilitator developed a proposal for how she could support the inquiry.

She put together a proposal with a breakdown of, this is what I will give you and these are the days ... So you knew what you were signing up for.

The whole process took several months during term four, and the project leaders considered that this was time well spent.

It was a good couple of months before we agreed to do anything, because we needed to know.

The two experts had different roles and worked with the inquiry team in different ways. The MLE facilitator designed and delivered focused professional development (PD) at a whole-school level and offered leadership support to the project leaders. The PD was tailored to the needs of the school and designed with input from the project leaders to support the goals of the inquiry. This required the MLE facilitator and the inquiry team to work closely together. The team leaders saw the MLE facilitator's role as much more than simply providing PD. They saw her as an essential part of the inquiry team, with an investment in the project. The PD was necessary for the inquiry to succeed.

I don't think you could say it is as simple as just providing PD. She's *part* of our project. Yes, she's provided PD, and yes, she's given that support to the staff, but she also genuinely wants to know, 'How have we gotten on? Where did we get to with this? Where will we take it from here?' If she were sitting here with us now, she'd be able to participate in this conversation. She's part of the project. She cares about us as a team and the junior school project that we're leading.

The role taken by the researcher was slightly different. The researcher provided 'big-picture' expertise at the level of inquiry design and implementation. She deepened and challenged the thinking about the inquiry aims, questions and processes for collecting and analysing data.

She asked the big questions like, 'What do we value? What do we want out of our learners?' When she looks at our project it's not critical, but it's eye-opening. She just gets us to turn the page, see things with new eyes. She shifts it to a whole new level. It's the way she challenges us and asks us questions.

The project leaders gave as an example the way the researcher had helped them get students to talk about their learning rather than just their enjoyment of activities, through facilitating, modelling and questioning, but without taking over or making decisions for the teachers.

We collected student voice last term but in a different way. She had a conversation with us which has allowed us to think about a new way of collecting student voice this term.

She also helped them see the "deeper value" in the data they were collecting and to see the significance in what they were doing by making links to other research in similar areas that the team leaders were not aware of.

And she'll go, 'Have you read this article on ...', and she'll send you it. And then we'll read it and say, 'Wow that's what we're *doing!*' Because you don't know you're doing big important stuff that links to other people's research until someone gives it a name. And because we're teachers, not researchers, we don't know everything else that is going on.

The use of the experts by the project leaders evolved over time in response to evidence. For example, on finding that rotating the leader role around all of the teachers in each whānau group was not working as well as anticipated, they decided to have the leader positions filled by one teacher from each team for the duration of the year and expanded the MLE facilitator's role to include giving support in leadership to the whānau team leaders.

### **What were the benefits of working with experts?**

The project leaders considered the main value add that the TLIF funding offered their junior school project was the capacity it gave them to fund experts and the release time needed for teachers to work with them to implement a quality inquiry process and achieve a robust outcome.

We saw the TLIF as an opportunity to get time and space, i.e., money to support what we were doing anyway. The TLIF was a bonus that enabled us to afford the experts and has made what we were doing more successful.

Release time has been massive because that's expensive for a school—the time to talk and discuss and work through ideas with each other.

Having the experts helped the project leaders engage the junior school teachers in the inquiry.

When we put this idea on the table and had a discussion about it as a staff one of the first things that came up was, 'Where's my support coming from?' So being able to say, 'We'll have experts coming in, we'll be able to get support,' was important.

It helped build a sense of ownership of the inquiry across the whole staff.

I think having the experts has enabled us to involve the whole staff in this. We've got about 45 teachers involved in the junior school project but the whole school is involved in the professional learning, because the ideas of personalising learning and teaching in teams is not just relevant to those 45. And in the next five years the *whole* school is going to go through that redevelopment phase.

And it gave the inquiry credibility.

It gives it credibility because it's not just from the inside. It's not just one principal saying, 'This is what, I think is going to happen.' You've got someone from outside supporting that process.

The experts provided the whānau team leaders moral and professional support and helped to build confidence.

It's also that moral support she gives us: You are doing the right thing. You are going in the right direction.

### **What made it work?**

Because the project leaders understood their needs and chose experts with the skills to meet them, they were able to lead a productive inquiry. It helped that the project leaders had known or worked with the experts previously because, "You know that they know what you need, that they value what you value."

It's like being in a relationship. If they don't understand where you're coming from or what your end game is, then it is harder for them to support you.

The project leaders acknowledged that not all teachers would have the luxury of already knowing experts they could approach but concluded that what was important was taking the time needed to work out what they wanted to achieve and whether the expert would be able to support them in achieving it.

I know not everyone can have the luxury of having known someone for ten years. Maybe what's more important is, before you commit to working with someone, you basically interview them, go through a consultation process so that you can be sure that they can give you what you need.

The project leaders also considered that it was important that the project had been driven by the teachers (rather than the experts), and for the benefit of the students at their school. Right from the start they were clear that it was *their* project. As one of them said, “It’s about us.”

It was for *our* benefit—it was not for [researcher]’s benefit or [MLE facilitator]’s benefit, or the University’s benefit. It’s for the benefit of our children, so whoever worked with us had to come in on our terms really.

We were interested in, and we still are interested in, ‘How do we lift achievement for *our* kids, the ones at *this* school?’ I think that’s why we didn’t even consider partnering with a university.

They did not want to be “someone else’s research project” or “someone else’s data set”. They considered there to be a risk of this happening if researchers or academics, rather than teachers, initiated the inquiry or if teachers handed the reins of the inquiry over to the experts “when things got tough”. They understood how easily this could happen because of the challenging nature of the work and considered that having support of school leaders was essential to ensure that this did not happen to them.

### Reducing inequities in maths outcomes at Waimairi School

The TLIF team at Waimairi School carried out a mathematics inquiry project (MIP) on how to reduce inequities in mathematics outcomes for their Māori and Pasifika students. The TLIF teachers had three main inquiry focuses: pedagogical knowledge, culturally responsive relationships and metacognitive strategies. A focus on these three areas in literacy had proved successful in an earlier inquiry carried out at the school and the teachers were keen to apply the ideas to the mathematics context. The school had ongoing working relationships with a group of experts in these three areas who were seen as critical friends of the school. Each of these experts had worked regularly with school staff for many years and were well known to the teachers. It was from this pool of critical friends that the teachers sought experts to support each prong of their TLIF project. In addition, the inquiry teachers saw their principal as an expert in the field of inquiry and used him to support the project in this capacity.

In most instances the TLIF inquiry teachers used their experts on a “just in time” and “as the need arose” basis. This was possible because the experts they were using were already in and out of the school on an ongoing basis.

We didn’t have them booked in ahead of time. It was, ‘Oh, we need them for this, now.’ It was ‘just in time’ [learning].

It’s that moment in time teaching for us. It is applicable right then with our MIP group.

For example, at the start of the inquiry the teachers described noticing that they didn’t have a strong enough sense of direction, and were not being innovative enough.

Last year we didn’t know where we were going. We found we were just doing more of the same. It didn’t feel innovative. We knew children were improving, but we knew it was because they were in small groups. We weren’t seeing the children’s passion for maths. The attitude hadn’t changed.

In response to this evidence they sought advice, in this instance, from the principal, and took up his suggestion to look at The OECD Seven Principles of Learning to see if there were any ‘gaps’ in their approach. They concluded that there were two main principles they needed to work on. The first was about the social nature of learning and the TLIF teachers began building collaborative activities into their mathematics programmes. The second was about placing the learner at the centre of learning, and the teachers began introducing provocations, such as dropping a bag of toy cars on the table and then deciding with the children what maths activities they could do with them, as a means of “bringing back the magic”. This was a shift from their earlier approach which had involved identifying and then targeting specific gaps in their children’s knowledge shown up through assessments.

There were many other examples. In response to low attendance at a whānau meeting about the project, for instance, the teachers consulted with their experts in cultural responsiveness.

We went to [the experts in cultural responsiveness] and said, 'We want to know how to make our parents feel more comfortable coming in to our school.'

Once the teachers had identified an area of need, they called in the mathematics expert to help them with this.

The process of teachers identifying their areas of need for expert support was collective. The teachers all taught in pairs in team teaching environments, and so in the first instance they discussed the emerging needs they observed with their partner. They then discussed these observations as a whole team at a weekly TLIF meeting and from there decided as a whole group the type of support they needed. Sometimes ideas about areas of need began as hunches that were then confirmed by others in the team with whom the hunch resonated.

There's an element of gut instinct, and then you will get together as a group and one of you will say it, and others will agree.

The teachers then contacted the appropriate expert to explain what they needed. Sometimes there were many conversations between the teachers and the experts to clarify exactly what was needed.

We discuss what we want to get out of the day, the best way to use that time. We have a picture of what our children need in our mind. Then we send an email [to explain that to the expert]. There are lots of conversations with them [about what we want them to cover].

The experts then designed a form of support to match the teachers' needs. As one of the teachers observed, "It's targeted to what we want. It's not one spiel for the masses." For example, in response to the request for support with whānau engagement, the cultural responsiveness experts got the teachers to do role plays showing their current practices, and then tailored their support in response to what they observed.

They got us to role play what we did [in relation to the initial meeting] and they could pinpoint what we needed. We had a great session on engaging whānau which was totally MIP related. It was focusing on the subtleties of a relationship.

However, there was still sometimes healthy dissonance about what was needed, or the teachers and the experts had different ideas about how best to solve a particular problem. For example, the teachers described how the way in which the mathematics expert saw the structure of mathematics learning didn't fit with their approach of teaching to the students' questions when doing provocations.

She struggled with letting the learning go in the direction the learners led because she was so focused on the progressions.

Because of their existing relationship with the mathematics expert, the teachers were able to have the frank discussions with her that were needed to move forwards.

If she had been a person that didn't know us she would have walked away and said, 'No I'm not doing that.' We had a relationship with her for many years and we could tell her. We could be straight up with her and she could be straight up with us ...We really respect her knowledge. If we hadn't had a relationship with her it would have really fallen down.

We taught her and then she adapted what she does to fit what we needed.

This situation required further conversations and finding common ground which provided rich learning experiences for the teachers and the experts.

She helped us not to forget about the learning progressions and we helped her think about lifting the 'lid' for student learning.

Sometimes the teachers did something different from what the experts suggested, or adapted it. The teachers saw it as their prerogative to use what they learned from the experts in ways they saw fit to best benefit their inquiry, even if this meant using what the experts provided in ways that differed from what the experts originally intended. They saw it as being for them.

It's for us. You take from what they bring to make it fit your inquiry.

They come with their toolkit that you can use in a way that fits with where you see your inquiry going and what you need.

We'd say, 'Right, we're still doing this, but we can think about how to integrate what you are saying.'

### **What were the benefits of working with experts?**

The TLIF teachers considered the use of experts to be essential to the success of their inquiry. The importance of including experts was related to ensuring innovation, rather than "just doing more of the same but better".

You're trying to do something *new*, because what you're doing is not working. So you need new ideas to stimulate your thinking.

Experts bring opportunities to think about things differently. It gets you out of your cycle of doing the same thing.

They bring fresh ideas. They bring that fresh perspective. We could get very insular.

They also observed that taking time out of the classroom to work with experts prevented them from getting lost in the detail of day-to-day classroom activities and from losing sight of the big picture, purpose and direction of the inquiry.

Having a day to step back from everything else—a day to step back, hear new stuff and reflect on it.

It gives you that time out of the classroom to think about what you're doing.

For this reason the team leaders ensured that every expert session was followed by a half day for reflecting on the learning and applying it to their current challenges. They saw the time to reflect as important as the time with the expert.

The time at the end to think, and talk about how you will put it into practice is so important.

### **What made the work with experts successful?**

The capacity of teachers to identify their needs in relation to inquiry goals and then explain these to the experts required, in the first instance, a shared understanding and ownership of these goals. The teachers had achieved this shared understanding through planning the inquiry and writing the proposal, and milestone reports collectively.

The shared proposal writing was beneficial because you had a very clear understanding of what you were taking on.

If only one person had written the [milestone] report we wouldn't have all reflected so deeply.

The teachers considered this shared understanding and ownership of the inquiry goals important because it helped them know what they needed the experts for. They advised that, if planning to use experts, be sure of your shared values and big picture so that you know where you are going.

Have a lot of discussions at the beginning about what you value and believe in. We did that and I think it helped us because it gave us direction. That initial stage is important—what we value in maths. I think that's how we got to the need to 'bring back the wonder' [which then led to the introduction of the provocations].

The capacity of teachers to identify their needs then required the capacity to use evidence to work out what was and was not working in the classroom. The capacity of the teachers to accurately identify what they needed the experts to help them with—in a systematic and rigorous way—was strengthened and assured through the process of meeting weekly as a group to reflect on the challenges and successes they were experiencing in their classrooms. They described these weekly meetings as “shared reflective practice” and considered these meetings to be essential for ensuring that they sought help in areas that mattered for their inquiry.

That’s a key part of it—that sharing of ideas ... Because of the meetings we have together everybody shares.

The teachers considered that they were able to work together with evidence in this way because of being in a school with a strong culture of inquiry and collaboration.

The culture of our school has fed into that. We are constantly doing inquiry. It’s the way we work in this school.

They also commented on the benefit of there being a crossover between schoolwide goals and priorities in terms of teaching and learning and the TLIF goals and priorities in terms of teaching and learning. This meant that the ideas and practices they were trying built on and contributed to something bigger happening in the school as a whole.

A lot of those things we were doing in our school anyway.

They saw having a range of experts to call on as being important.

I’d advise people to have variety, because they’re not all experts in the one field. They have different skills and viewpoints.

Finally, the teachers considered that their use of experts was successful because they had prior working relationships with them.

We had people already part of our [school] learning community—our critical friends who are already aligned with our values and beliefs. They’re all people we already work with on everything.

What’s important is that those experts know the school really well.

It helps to have people you have a connection with already. You know the person so you can be honest. It’s about trust.

However, the teachers were also aware of the risk of creating an echo chamber when only working with experts they had long-established relationships with, and commented on the need to look beyond those they knew and trusted.

I think we have to be careful we don’t cut ourselves off from other people as well.

### 3.

## Engaging with whānau and community

The TLIF monitors observed that rigor and opportunities for innovation were enhanced when teams invited members of the community to work with them for the purpose of informing and strengthening the inquiry. Such teams tended to seek out people from different parts of the community such as parents, teachers from other schools and members of community groups (such as churches, marae, local businesses) with the range of perspectives, skills and knowledge needed to frame and implement the inquiry. Decisions about who in the community to engage with were directly related to the nature of the inquiry question. Sometimes working out who to engage with involved seeking advice about where in different community groups particular knowledge and skills were held. In other cases, team members already knew who to approach and had already established relationships with them. Engagement with the community involved seeking and listening to advice at all stages of the inquiry. The involvement of different community members sometimes changed depending on the knowledge and expertise needed at each stage. Generally, all stakeholders were involved early in the conception and proposal writing phases. In these projects collaboration with community members often resulted in altering the direction, process or pace of the inquiry.

Monitors considered that the risk of jumping to the solution without first identifying the nature of the problem was less likely to occur when members from different parts of the community were invited to participate from the beginning.

Conversely, monitors observed that rigor and opportunities for innovation were limited when there was no community involvement, or when the main purpose of community involvement was to 'teach', 'inform' or 'gain buy in' from the community (rather than strengthen the inquiry). In these cases, teams tended to issue a general invitation to parents and community members to learn about the inquiry with little or no opportunity to shape or change the direction of it.

There are some teachers who have already worked out their mission, and then engage the community as a nice thing to do or as a tick box thing to do. And then they set up a meeting to tell them what they're

going to do but they say 'I don't want you touching my project or changing my project because I already know what I want to do.'

A lot of it is, 'We'll tell our community' as opposed to inviting them in at the design stage and including them in the inquiry as a genuine puzzle of practice.

Monitors also commented on the opportunities for whānau and community members to actively *participate* in the project, and the value of this occurring right from the point about deciding on the topic of inquiry and how to frame it, in much the same way they talked about the involvement of external experts.

There's a commentary about the difference between engagement and participation. A lot of the schools talk about community engagement saying, 'We will tell our whānau what we are going to do, we will tell our community we are going to do this,' rather than actually having spoken to their community and having them part of the conversation about what they want to shift, perhaps. And you can see the difference in that. I think there's a few really good Māori-medium examples because I think whānau are so embedded in those schools, and they see the importance of engaging with whānau *before*.

The better ones said, we want the parents to notice what is going on at home, and bring that back, but that was rare. It was rare to see the involvement of a parent inside the work.

The following vignette describes an inquiry in which, not only did community members (including iwi representatives, local industry experts and school neighbours) participate in the inquiry, but were the ones to initiate it, in response to a local challenge in the community.

## Project Papatuanuku and future-oriented learning

The Hauraki Plains College inquiry (Project Papatuanuku) was the result of an invitation from the Hauraki Iwi Collective to work with them and other experts in the community on how to use a 40 acre block of previously peat-mined and now unproductive waste land near the school, which had been granted under a Treaty settlement. The iwi wanted to explore ways of using the land that were culturally responsive and economically viable, and to provide students with opportunities to: achieve school qualifications; develop awareness of vocational opportunities and connections; and deepen their cultural understandings by working with iwi on the land.

For some time the principal and staff had been engaging with ideas about future-oriented education through work with two researchers from the Auckland University of Technology (AUT). When the TLIF funding became available, the principal saw the opportunity to apply the theoretical ideas they had been exploring in the context of the iwi-initiated project as a TLIF inquiry.

That whole thing about knowledge building in the space. When this came along I thought, 'Wow, this is knowledge building in the space. This is wicked problem solving, this is community working together. This is all of that.'

The teachers wanted to explore what future-oriented, or 21st century, schooling might mean for teachers' practice in a real-world problem-solving context in which there is no known solution. They were interested in exploring: the challenges when schools work in partnership with iwi, scientists, farmers and researchers; how a diversity of ideas, expertise and cultural norms work in this space, any rethinking of teacher and learner roles, any shifts in teachers' thinking about the kinds of practices that will build the learning capacity of students as they collaborate in a community context; any impact on students' sense of agency, engagement and aspirations; and the implications for curriculum design at a local level.

The key members of the school team initially included the principal and the school's three Primary Industry teachers. The project was initially to include Year 12 students who in 2015 were enrolled in a Level 2 Agriculture course, and aiming to achieve National Certificate of Educational Achievement (NCEA) Level 2, as well as a Vocational Primary Industries award.

## Working with community on the land

Conversations between the school and the iwi about how they might work together had occurred over an 18-month period before the TLIF funding became available. The school and iwi then signed a memorandum of understanding and planned for students to get onto the land following a pōwhiri in term three of 2015. However, this did not happen until early in 2016, as the iwi had other commitments and needed time to get the right kaumātua. The school staff understood the need to respect the process but found the delays hard.

Our perspective was, 'Right, let's get going.' It was hard because we were all amped for it and really excited and then you had to sort of stall, put it at the back of your mind. It was mentally quite difficult. It has been a slow growing.

One of the key teachers described how, after the long wait for the pōwhiri, "All of a sudden it just happened!"

It ended up being the second week back this year. It was like, 'Wow!' It was a bit chaotic. It was like, 'It's happening next week!' And we had been waiting for months! And then of course it was a new group of kids who we hadn't been preparing for it. But that's the reality for schools—and for iwi too.

Looking back, the principal and teacher reflected on how different this way of working was from the way teachers and schools usually work.

We are invited by them [the iwi] and not the other way around. So it's at *their* invitation. It's not us initiating it. And that's different from how schools usually do things. Usually we're proactive. We say, 'We're going to do this, this, and that.' But we've been invited by them. It's at their timing too, and their protocols.

The principal and teacher described feeling anxious and doubtful over the time it took to get onto the land.

Now it's not so bad because we're there [on the land] doing stuff. But before, you doubt lots. You wonder, 'Is it going to happen?' The worst bit was doing that January [TLIF] milestone report. We were thinking, 'What are we going to say?'

The principal and teacher also described feeling anxious about the pōwhiri, and worried that they "wouldn't be getting it right". They observed that the students were also worried that they "wouldn't measure up". However, they found the iwi very supportive of them and of the students' involvement.

The iwi were so good in trying to make us comfortable. They really encouraged [student] because he was so nervous. I remember them saying, 'Just keep going. Be encouraged.'

Following the pōwhiri, they went on to the land, the kaumātua led a blessing and the iwi talked about "what the land means, and some of the landmarks, and a little bit about the history—what the land was about".

The Primary Industries teacher described how she had already started providing her students with learning opportunities related to the iwi project in 2015 and included three year levels in the activities (Years 11, 12 and 13) so that continuity could be maintained when the older students left the school.

A lot of kids have been exposed to it so you can have a few disappear, and there are still kids [left] who know what is going on. We talked about going out to plant the trees and that whole thing of ownership. Like, 'Wow, we did this from scratch!' They're really excited about that.

The next step was to bring in a round table of experts, including local farmers and industry experts, to talk about what could be done with the land.

That's the knowledge building thing. To bring what they know to that space.

The principal and the teacher considered the complex and open-ended nature of the question about how to make viable use of the land made it both more necessary and more possible to engage in meaningful ways with the community. However, they considered the students would find the open-ended nature of the problem and their contribution to solving it challenging.

I think they're so used to having answers that the knowledge building thing with experts is going to be a real eye-opener. Lots of kids go, 'We're not up to this.' They're mind boggled that they've got this responsibility, and I think somehow we've got to build into kids, 'You're capable of this.'

The principal was hoping to include other learning areas, and to "cross learning areas". She described how the Māori cultural studies students had been out to the land and their teachers were looking to make links to achievement standards, the science HOD had been out to the land and had "seen possibilities" and the social science HOD had shown interest because:

What's the point of marching the kids all the way down to Tongariro, when there's amazing local stuff she could base the Level 3 stuff around?

### **What were the challenges?**

One of the main challenges for the teachers was fitting in with the time frames of the iwi and industry experts. The teachers had, for example, originally planned to have the round table of experts in at the start but because the pōwhiri was delayed they got on with the teaching before the expert panel met.

This time last year we were expecting to be on the land, so I set up my curriculum intending to be on the land. So what I am teaching now for a second year is actually with the iwi block in mind, like with the beehives, and I'm teaching soil units and stuff. You have to be flexible to try and make it work. You can't just say, 'Oh this is how it's going to be.'

That is how the iwi worked. That's the reality. So we had to go with that. We just continued.

It was also hard to find times when industry experts from the farming community were available.

Co-ordinating all of that—it's not easy. People are so busy—even the industry experts from the community. Farmers are busy people and we have to rely on them for goodwill. We're not paying the experts to come in so we have to be mindful of that. I wouldn't do this from July to September because that's the busiest time of the year for dairy farmers.

They were very aware of the mismatch between how the school timetable works and how members of the community work.

We live in our schools and we have our school bell and our timetable. That's not how most of the world works.

Working with the iwi and experts required flexibility, and some teachers found this easier than others. The Primary Industry teacher described how one of the lead teachers, who had since left the school for another job, found it very difficult to adjust to iwi time frames.

He was really frustrated with the pace. He couldn't work in that time frame. He was from a different perspective. He lost enthusiasm and passion for the project. He ended up not really engaging with it, even when it was starting to make progress.

The Primary Industry teacher also observed that the ability to adapt was her "biggest learning".

For me, one of my biggest learning has been unexpected challenges, and then having to adapt. In January, being all excited and ready to go, and then having to stall, and then having it all go again. And with [key teacher] leaving, that was a blow. So *my* learning has been adapting.

Another challenge related to questions of sustainability and continuity when engaging in a project with such long time frames. As the Primary Industry teacher said, "I don't think this is going to be a quick

project.” The long time frames meant the teachers had to think and plan in different ways. For example, the Primary Industry teacher described how:

If they [the students] planted blueberries, that’s three years before you get a crop from them, so I think the nature of what we’re dealing with is not a short term thing. And so my kids are going to go out there and plant some natives soon, but then we’ll have to maintain them past when those kids are at school. So that’ll have to be the next kids in the future years to maintain them.

She observed that:

I can’t get trees grown from seed planted out in one year, but then I want to provide kids with the whole picture. So I have to make sure I’ve got all the bits in there, so they *can* see the whole picture, but it’s tricky.

The teachers were also aware of the need to ensure continuity of school staff involved in the project.

The Primary Industries teacher described how it “was a real blow” when one of the lead teachers left the school, because he had been the one who had forged a lot of the industry connections, and how important it was to get the “right person” to replace him.

We’ve thought really hard. We’ve really tried to make sure the person we get for the replacement will work. We’ve had to think hard about sustainability. The lady we employed immediately took to the project. It was part of the interview questions. Just listening to her reaction [to the project]—that sort of sealed it for us.

### **What made engaging with the community work?**

One of the reasons the teachers were able to engage effectively with iwi and industry experts was that they, and their families, had *existing* connections with the community and the land that sometimes went back several generations. The principal and the Primary Industries teacher, for example, had lived all their lives in the community, had been pupils at the school and were both from peat farms. As the Primary Industries teacher said:

There’s so much history to it. [The PE teacher] remembers his father living in Morrinsville, and being in the fog for days, and it was from the burning of the peat. [The principal]’s husband has a lot of knowledge about peat. There are lots of stories.

These connections were important for building and maintaining relationships. When they went onto the land, the bus company took them all for free, “because it’s a community thing”, and at the pōwhiri, the principal discovered that one of the iwi women there had shared the same bus to school with her as a child.

A lady there went on the school bus with me. That was really cool to catch up with her again. So it was those connections again. It felt really good. We were connected.

Members of the lead team also had the capacity to build *new* relationships and industry connections.

The engagement with iwi and industry experts was also effective because the school staff realised the long-term nature of the project and were willing to commit to it.

Having lived in this community all my life, we don’t go into this lightly. It is long term and there is a moral commitment to it as well as an educational one, and I’m really mindful of that. We could do a lot of damage in terms of the iwi. If we just pulled out what are we leaving the iwi with? We can’t do that. We’ve committed to it now and that means being responsible to that commitment long term as a school.

A project with community engagement involves additional costs, such as transport of students, and the principal and Primary Industries teacher observed that without board support they would not have been able to make the progress they had.

They understand that if it's going to work, they're going to have to commit to it, in lots of ways—our time, funding ... They've always supported the primary industries too. It's a valid pathway for our kids and it reflects who we are. Having the board buy in for sustainability is really important.

Finally, the teachers were committed to the project despite the challenges because they saw the value of connecting with the community for student learning.

There was one point and it was like, 'What next!' I think that says something about the project too—that it's actually got huge value for kids' learning. You feel more inspired when you talk bigger picture about it because you see the vision.

## 4.

# An evidence-based, dynamic approach

Monitors observed that the inquiries with the most potential for innovation started with a puzzle or question that teachers did not know the answer to, and were genuinely curious about. These teachers then collected data that they thought would shed light on the puzzle and used their analysis of this data to work out what to do next. When findings from the data analysis differed from what the teachers were expecting, they were able to re-think and change their intended next steps.

What you can see in some of the projects that have done well is good evidence, a really good innovation that's actually connected to the evidence, and the ability to reflect on that and make changes accordingly.

Conversely, inquiries in which teachers set out to find evidence to match a preconceived answer or solution to a particular problem or had preconceived ideas of how to get there had less potential for innovation.

I'm finding that some projects have pre-determined the outcomes and they've engineered the outcomes. Because for them, they already know what they want to find out and where they want to go, and it's just a case of using the money to get there. They're not using it as a dynamic approach.

As one of the monitors observed, there is little potential for innovation when the inquiry produces findings that confirm what is already known in a particular school context. The purpose of the TLIF funding is to explore and to innovate.

If it's going to give us what we always thought it would give us—well how innovative a project is that? It's supposed to be the Teacher Led *Innovation* Fund. A lot of innovation is discovery. If you discover nothing new from the day you wrote the project brief, it was a set up.

Others missed the step of inquiring into their data altogether, concentrating instead on implementing a solution.

People jump to the innovation rather than really looking at their data and deciding what they'll do from there.

The ‘solutions’ suggested by many teams were pre-existing programmes or ‘ready-made’ packages, often with only a tenuous relationship between the teaching and learning needs shown in the data and the programme identified. This led some monitors to conclude that these teachers either misunderstood the purpose of the data analysis stage of inquiry and its relationship with the innovation or were more interested in funding an intervention than inquiring into their practice with the view to change practice in light of the findings of the inquiry.

A lot of them are applying for the *innovation* rather than the *inquiry*. It does appear to me that some people apply to implement some person’s programme rather than to really look at their data.

One monitor saw it as a “hangover from the old PLD days” when schools were given ‘packages’ or a one-size-fits-all answer to challenges.

Most monitors considered it too early to comment on the extent to which teachers used findings from one round of inquiry to inform or alter their approach for the next round. However, they observed that some teams had set themselves up in their design and initial implementation of the inquiry to be *able* to do so.

Some teams were positioning themselves to react to that [what evidence showed them]. They were positioning themselves to be able to shift their focus, to be able to say, ‘So, we’ll do more of this, or less of that.’ Their data collection was broad enough for them to capture that sort of information. It wasn’t just a pre-test, post-test model.

Other teams seemed averse to changing direction from their initial plan, even in the face of evidence suggesting the need to do so. Monitors considered a possible reason for this reluctance to deviate from initial planning related to the belief that this would be seen as a failure.

Some teams just want to comply with the Ministry. They might not want to look like they’ve done something wrong. So a project deviating is not a safe thing.

This monitor wanted teams to understand that changing directions is what TLIF is all about and that innovation emerges through the unexpected.

We do want you to deviate when it is clear that this is the best option. We do want you to innovate. We want to make it safe for them to innovate.

The vignette below tells the story of a TLIF project in which the teachers did just that.

## **Marae-based learning at Westlake Boys’ High School**

The Westlake Boys’ High School inquiry involved exploring the impact of multi-curricula, marae-based learning on the engagement and achievement of Years 12 and 13 students undertaking academic tasks for NCEA Levels 2 and 3. The lead team involved two science teachers, one social science teacher and one Education Outside the Classroom (EOTC) teacher. The teachers worked with Te Uri O Hau who were developing marae-based education centres throughout the Kaipara region, and the research staff at Unitec Institute of Technology who were supporting Te Uri O Hau to do so.

In September 2015 the lead TLIF teachers took 11 of their colleagues to stay at the Tūpuna Marae to take part in the education experiences being developed. The purpose of the visit was for school staff to experience what the students would experience when working towards unit standards at the marae and to identify possible links between the marae-based learning experiences and the learning opportunities the teachers could offer at school.

## A change in the inquiry focus

However, on visiting the marae the lead teachers decided to re-think the design of their inquiry because they found that the kaitiaki were not ready to deliver unit standards and did not have the capacity to deliver the standards in a way that they thought would engage their students.

We were hoping to go and trial this product as such. We knew it was still in the development stages but we thought it would be much further ahead.

When we went to the marae to meet with the kaitiaki, they were really far from our expectations in terms of their understanding of actual teaching in an engaging way, and their understanding of the school system as it currently is. We have a group of teenagers who don't actually want to be there listening to you.

The lead teachers realised that their plan to measure the impact of multi-curricular marae-based learning on student achievement was not going to work. However, the lead teachers found there were other valuable experiences the kaitiaki could offer and decided to orient their inquiry towards these other opportunities.

## A focus on student experiences and engagement

The lead teachers realised that the main benefit for students on visiting the marae would be in terms of *experiences*.

It's made me think that learning doesn't necessarily have to be the way we do it at Westlake. There is a lot of pressure. We are a results-based school. We've got high expectations and there's this tendency to have this lens, that we see education like that. It's enabled me to think about how education can work in other ways, and from a Māori perspective. It's taken me away from the rigidity.

Results-based stuff across standards is not the only educational outcome we can look at. I can see from a systems level that they need accountability but we should still explore other outcomes.

I come from outdoor education—giving them learning *experiences* rather than locking them into a classroom, so kids can learn in a different way—trying to focus on the *experience* rather than the results.

The experiences the lead teachers had when working with the kaitiaki also prompted them to think deeply about student engagement and what it might mean in the context of the marae experience they had just had.

It may not even be about engagement in the way that most of us think about a student being engaged—having a great time, and thinking, 'Oh this is great.' It might just be, 'Oh I found that really interesting in a way that I will remember for a long time, and it will change my lens a wee bit' for some of these guys.

The conversations with the kaitiaki also prompted the lead teachers to think further about the purpose of education more generally.

It's been really interesting hearing outside perspectives on education. That's the part I've found most interesting. When [iwi representative] asks, 'Why do you do that?' it makes me think, 'Actually, fair point. Why *do* we do that?'

At the time of the interview the teachers were preparing to take a group of English as a Second Language (ESOL) students to the marae, and later a group of Māori language students. The teachers had not abandoned their initial idea of exploring the impact of cross-curricular marae-based learning, and still saw this as a possible inquiry question further down the track. But they realised that in the first instance the most fruitful focus for their inquiry would be student experiences and engagement.

In two weeks 18 ESOL students across a range of year levels are going up. They are going up with a range of learning outcomes in mind in terms of the classes they are involved with but the biggest thing is engagement and their experience of things they wouldn't normally see.

## A focus on teacher learning

Initially, the intention was to focus on the impact of marae-based learning for *students*. However, on visiting the marae, the lead teachers realised there was valuable learning for *teachers*, especially for teachers from a school like theirs that they described as being “at the more traditional end” and “without a very strong Māori flavour”.

Part of our proposal was to give staff the opportunity to do that, the opportunity to take classes to the marae, to do different forms of secondary education. That to me is as important as anything.

The lead teachers reflected on their *own* learning from visiting the marae.

Being culturally responsive in your classroom—you learn a lot about it. I went to a very multicultural school so this is not new for me. But it really has confirmed the importance of that I think. I have students in my classroom who were brought up in quite different environments, and I need to be flexible for them as well, and not just expect them to walk into this box that is my classroom, and behave in particular ways, because we are Westlake.

For me the value of this has been making the cross-over from a school that does not have a very Māori flavour to something that is completely Māori. We use the word authentic. Well it is. We go to the marae, we do pōwhiri, we do waiata, we listen to stories. We know what they are saying some of the time, and sometimes we don't. It's just been great to experience that.

The lead teachers also reflected on the learning of the 11 other teachers they took to the marae.

We took a range of staff—national and international, some familiar with tikanga, some completely out of their comfort zone, and for all of them, the learning was extremely beneficial.

It's very much a confidence building thing. For a lot of urban schools and a lot of larger schools, who don't have a high percentage of Māori students or staff—you're completely isolated. We have a lot of English and South African teachers here who know nothing about Māori history or culture. I can't believe you are allowed to teach in New Zealand and know nothing about the Treaty of Waitangi.

They saw how this teacher learning would contribute to their overall goal of lifting the engagement and achievement of their Māori learners.

Can we engage these students by giving them a new experience? Or can we engage these students by learning more *ourselves* to relate to them better? So it's looking at *both* of those.

Experience *automatically* gets transferred into your classroom. Ultimately we are trying to engage our priority learners of which Māori are one of them, and if you don't have any understanding of things Māori at all, how do you relate?

## A focus on building relationships with iwi

As could be expected, the different backgrounds of the teachers and the kaitiaki, and different understanding of education and ways of working resulted in some challenges for all parties, as well as new opportunities. The main challenges related to different ideas about time, communication and systems. The iwi representative, for example, found the school systems frustrating.

[The iwi representative] was frustrated and reasonably so about why we couldn't just take a group out with a couple of weeks' notice. They didn't understand the processes that we have to go through, the time frames that we have to plan a year out. And no understanding of the safety action plans that have to be completed, and those sorts of things. There is a bit of a disconnect between their expectations and the expectations that a school would have.

And the teachers sometimes found maintaining contact with the iwi representative frustrating because he lived outside of cell phone coverage, did not check or respond to emails as frequently as the teachers

were expecting and was more comfortable with face-to-face than virtual meetings. In addition, some internal challenges the iwi were experiencing at the time caused delays in moving the inquiry forward.

Not only are we having to change our direction, now we are just sitting here twiddling our thumbs. That was frustrating—as well as realising that everything doesn't run on our time frames.

However, the lead teachers began to adjust their expectations and time frames, to focus on building their relationships with the iwi representative and communicating in ways that enabled them to do so effectively. This involved a 90-minute drive for face-to-face meetings but resulted in much more productive conversations.

It's just such a shift in thinking, but we're getting there. Sometimes from a Pākehā perspective I think, 'Just check your email! Just answer your phone!' He's so passionate about it, and you want to fit it into a western context, and we need ... It can be really frustrating, but we're learning to accept that we just have to drive up to see him and that's ok. Unless we have face-to-face meetings things just sort of stop.

We have extended our time frame because nothing has been happening and I guess for me that has been the most frustrating thing. And what has caused the different approach to our research is the realisation that you can't always get hold of someone when you need to. They don't respond straight away to email. In fact they basically don't respond to email.

As a result, the teachers decided to focus their inquiry more explicitly on the *process* of building relationships with iwi because they realised that if large urban schools such as theirs were to engage in marae-based learning they would need to engage in these relationships.

We recognised it takes longer to build a meaningful relationship, so that became more of our focus, and how to do that, how to build these relationships.

[The new focus/question became] Is it viable to take students on these EOTC trips and engage with the local Māori community? And the challenges faced in trying to develop that new relationship—building a relationship with a rural hāpu we had no existing relationship with before, and we're not even in their area.

The lead teachers considered there to be a real need in large urban schools for opportunities to engage in authentic Māori contexts in meaningful ways, and hoped that other schools would find their inquiry learning useful.

### **Tolerating uncertainty about changing direction**

The lead teachers felt anxious about changing the direction of their inquiry to focus on student experiences (rather than shifts in achievement), teacher learning and the process of engaging with iwi, especially in relation to what they would measure.

We realised we weren't going to do what we planned because our findings were changing but I think we were a bit nervous about that as well, to be honest. Our focus changed to be not so much on hard data but on the process.

I guess what we have struggled with a little bit is, 'How do we measure these things?' Rather than measuring something, are we just going to report back on our experience and our findings, or is there something we are going to be able to measure?

However, after talking with their monitor, they realised that they could still draw on student voice as a source of useful data.

We can still document their feelings, their attitudes, their reflections on it. We can still draw conclusions from that. It's just not going to be perhaps as concise as we first thought. I don't know if it ever could be because there are just so many variables that influence student achievement. Trying to tease out the effect of this on the learning is very, very difficult.

They also worried about whether their new direction would be of value to others beyond their school.

I think what we have really struggled with is, 'Is what we are doing of value?' We feel completely in the dark. Maybe it is just because we are a large urban school that we are not connected to our communities. Maybe there are schools that are completely engaged with their local community and marae. So it is very hard to know if what we are doing is of value.

However, the lead teachers tolerated the uncertainty and there were a number of factors which enabled them to do so. First, in the absence of an external expert, the team consulted with their TLIF monitor who provided inquiry expertise. The lead teachers described the monitor's advice and support as "really beneficial" observing that, "Sometimes you just need a little bit of clarity and reassurance."

They also had a shared vision and a commitment to what they were trying to achieve.

We're all passionate about education, and this, as an opportunity for improving education. And we're still passionate about the *idea*, even though it hasn't turned out like we expected. We're still seeing value in giving these kids these experiences, and anything we can contribute toward furthering that idea has got to be of some use to somebody.

We work well together as a team because we all see the benefit of what we are trying to do.

And finally the lead teachers were committed to the iwi representative and his vision for marae-based education.

I think too now, we've developed quite a strong relationship with [iwi representative], and I feel like we'd let him down if we said, 'Look, it's too hard. See you later.' It would be wrong.

It's spending time in these communities and having conversations about education, and seeing people like [iwi representative] really frustrated because there have been some brick walls in front of him. And I sort of think, well I'm in a position to help. Maybe I could do some of the 'how to' and help. I kind of feel a bit of ownership to do something.

Ultimately what I'd like to see is that we could trial it, and keep trialling it, and build up a relationship and then create a sort of business model so the iwi could sustain it.

Ultimately, what made the project work was that the lead teachers didn't lose sight of their overall goal (improved engagement and achievement for Māori students). They were strongly committed to their goal but they didn't have fixed ideas of how to reach it, which enabled them to notice opportunities they had not initially anticipated and made it easy for them to discard approaches that were not working and to try others.

If we had not been willing to change our approach we'd have just had to say, 'We're just going to have to bin it and give the money back.' It would be like a standard not achieved—no, a standard not attempted! We would have had nothing to say but that the two systems don't work together. That's it. But that's not the way we wanted to go and the big message we've come out with from this is about needing to be extremely flexible.

There are so many components and that's why we had to be flexible, because we're not just doing it on our own, we're not just doing one thing. We're looking at communities and relationships and interlinking webs all over the place.

We've gained insight into what is, and what could be, and are much more realistic about what we could achieve. And I think some realisation that the really valuable outcomes are around those relationships. Realising that student engagement is important and does have value.

## 5.

# Shared ownership of inquiry

The monitors considered shared ownership by all team members to be essential to the effectiveness of the inquiries.

The key thing schools have to realise is that it's a project with a project *team*, and that while it is teacher led innovation, it's not just led by one person, it's led by a group, and that is absolutely critical.

Shared ownership needed to happen at the start and at all stages through the project.

So it doesn't just mean, 'We're going to form a team, we're going to do a joint project.' It's how you really share that learning, and share it at each of the stages.

Teams with shared ownership of the question and design were more likely to get off to a good start and maintain their momentum than those in which only the leader(s) understood the goals of the inquiry and believed in their importance. They had planned from the outset collaborative ways of working together to ensure that ownership remained shared throughout the inquiry. These teams also tended to have clearly defined roles. Team members had a deep understanding of their own role and the capacity to take on the role of another team member if the need arose. They were therefore better equipped to cope when challenges arose during the implementation of their inquiries, such as team members leaving.

If they know what their roles are going to be and if someone leaves, it's much less onerous to find someone to do that bit. If they can do that, the project's in safe hands.

Teams that had not established working relationships, which had not involved all team members in the conception of the project and did not have clearly defined roles tended to take longer to get going. These teams also tended to struggle in the face of challenges such as the loss of the team leader, because the remaining team members did not always have a full enough understanding of the inquiry question and goals, or were not invested in it.

In one of my projects just about all of the team left, and it was left to someone who wasn't even involved in the planning. I think it might fall over—that one. I think this person was attempting to do it but she wasn't transitioned into that role because the key people left.

It was important that a sense of ownership was held at a *school* level, as well as team level. One of the monitors argued that if an inquiry contributes to school goals and is owned by the school, then it is more likely that the work would be sustained in the face of challenges. This was because this work would necessarily be understood and valued by all staff at the school.

If an understanding of inquiry is embedded in the school you can actually have a change [of the inquiry leader], but if it's not then you are at deep risk.

Some inquiries involved more than one school. In the most promising of these, a shared sense of ownership across the schools was established early in the piece. Each school involved brought something necessary to the success of the inquiry and there was a common understanding of why each school was involved and what it contributed. They had planned for cross-school collaboration at the proposal writing stage, and established systems for ensuring that teachers from each school met regularly and shared the conceptual as well as more practical work at each phase of the inquiry.

They have to plan for collaboration. So it's not just expected to happen along the way. I think they need to put on their action plans when they're going to meet, when they'll be sharing together, if they'll be doing walk-about to see what each other is doing, if they're going to use google docs to do things, whether they'll be putting audio or video online. There's a wide range to collaboration, especially now with digital modes and access.

I think it's actually quite difficult for schools to collaborate, and they need to create mechanisms to collaborate. So some of the schools have constructed across-school meetings for their inquiry, and they meet once a term.

The following vignettes provide models of inquiries with shared ownership—the first is an inquiry involving the staff at just one school, and the second is an inquiry involving three schools.

## **Impact of flipped classrooms at McCauley High School**

The McCauley High School inquiry was on flipped classrooms for accelerating the outcomes of priority learners. This inquiry was part of a bigger piece of work already going on at McCauley in relation to the development of Modern Learning Environments. The initial inquiry team included the deputy principal (a maths teacher), the head of history, the head of Māori and a chemistry teacher. Despite three out of four of the original team leaving half way through the inquiry, it continued to thrive, largely because shared ownership of the inquiry was developed at the team and school level from the start.

### **Team ownership**

The inquiry had two lead teachers. The two leaders had been working together on the idea of flipped classrooms before the TLIF funding became available and so were able to get off to a strong start. Having two team leaders rather than just one created a conversational decision-making space that others could join in on, rather than having the ideas held in one person's head. Having two leaders also proved to be important when one of the leaders had to leave the project to go on maternity leave.

The process of working on an evaluation plan with the external expert at the beginning of the inquiry further strengthened the shared ownership of the ideas. The evaluation plan had objectives related to the investigative questions and check points. The existence of the plan meant that ideas and processes were accessible to others. It also provided a touchstone where the initial directions were laid out and could be referred back to. This initial work with the expert strengthened the ability of the team leaders to include other staff members in the inquiry.

We could communicate the goals of the project because of the thinking we did with the expert.

As would be expected, these two other teachers had less ownership of the inquiry, having come to the ideas later than the leaders, but were supportive of it.

### Board and school leader ownership

The focus on the flipped classroom was in the school's strategic plan, and was a priority that was in place before the TLIF-funded inquiry. Because the inquiry contributed to something bigger already going on at the school prior to winning the TLIF funding, it was easy for the inquiry team to gain board and school leader understanding, buy-in and ownership of it. Because the board understood the value of the TLIF inquiry they were willing to fund additional costs associated with it. The board approved funding for the two lead teachers to attend the Flipcon15 conference in the United States at the end of 2015, professional learning development (PLD) for other staff members on the technologies and pedagogies associated with flipped classrooms, and teaching tools and resources.

Likewise, because the principal understood the inquiry and had a shared sense of ownership, she gave the project leaders the freedom to run the project how they wanted to. She also supported the inquiry by reading and discussing the literature on flipped classrooms provided by the team. She made her support of the inquiry visible to the rest of the staff by, for example, supporting the Tuesday morning open forum sessions for teachers exploring flipped classrooms.

The principal is giving us the freedom to drive it. Anytime we buy the literature she will read it. She's got our back. She makes the coffee at the Tuesday morning coffee and muffin sessions.

There were advantages in having the deputy principal (DP) (and head of curriculum) as one of the inquiry leaders, in terms of maintaining board and principal ownership of the inquiry. She considered it "really important that the Board could see that they were getting a bang for their buck" and her direct access to the board in her role as DP enabled her to provide them with information to show this. She had a direct line to the principal and the board when she wanted to get things done.

There were also advantages in having the DP as an inquiry leader, for building *staff* ownership of the inquiry, because, as one of the team members observed "It shows that it's valued by the school." It also provided an opportunity for a school leader to model being a learner too.

It's important that the DP can get up and say 'I did this and it didn't work.' The literature on learning leadership shows that it is important that the leader of the school is involved in the learning process.

Because of her leadership position, the DP had the capacity to shape school systems in ways that supported inquiry goals. She was, for example, able to rewrite the school PLD programme so that it was informed by the goals and findings of the inquiry, and enable staff to inquire into the flipped classroom as part of the appraisal system. Also, as DP she was "not bogged down by the practicalities of the school" and so could lift her head above the day to day and think about the big picture and direction of the inquiry.

There were also some disadvantages in having the DP as one of the inquiry team leaders. These included the risk that some staff would see flipped classrooms "as mandatory" or would feel obliged to flip their classroom because "it is the DP's project".

### Staff ownership

The team leaders fostered staff ownership of the inquiry by planning for it from the start. They purposefully chose teachers from different learning areas to be part of the team in the hope that this would help innovation to spread across the school rather than being seen as belonging to just one department. They then developed a series of initiatives for sharing the inquiry with other teachers across the school. They provided learning opportunities for staff that were intentionally differentiated to cater for differing learning needs, preferences and styles.

Some have the pedagogy but don't have the IT skills and vice versa. We've had to differentiate the learning.

We have tried to use a range of ways.

They developed a school guide and a website about flipped classrooms, with links to other websites, resources and YouTube clips. They bought copies of the literature on flipped classrooms that had informed their thinking, strategically including a book showing what the flipped classroom can look like in different learning areas. As one of the team observed:

They might not have read the whole book, but they've certainly read the section on *their* learning area.

The team's commitment to sharing ownership of the inquiry was also reflected in their use of the TLIF funding, which was used for the benefit, not just of team learning but for the wider staff. They used some of the TLIF funding to release teachers from their classrooms to observe others or to send other teachers on courses, and described this as "money well spent".

Based on her own experience of introducing flipped classrooms, the external expert advised the team to provide a "low stakes environment" in which teachers could safely share their failures and successes and ask for help. In response, the team initiated a Tuesday morning flipped classroom open forum with coffee and muffins. Numbers attending increased over time with up to 16 attending. This success highlights both the team's ability to respond to advice and the value of an external expert with the knowledge, skills and experience associated both with the topic (flipped classrooms) and with the *process* of collaborative inquiry and its spread.

Promoting the idea that there is not just one right way to flip the classroom was important for enabling wider staff ownership. The DP described how she got staff to visualise what *they* wanted their version of a flipped class design to look like, as a way of conveying this message:

There wasn't just one right way teachers had to adapt it. The conference told us that there isn't just one way to flip. That was the biggest take-home.

Creating an environment in which it was safe to make mistakes was also important for enabling wider staff ownership. The team achieved this by admitting to their own mistakes, their own attempts to fix them and their own changes in thinking along the way.

It was safe to make mistakes. We created an environment where it was safe to make a mistake.

One of the team recalled that this message was what sold inquiry into flipped classrooms to her.

I remember [team leader] saying, 'If it doesn't work that's fine—just pick it up, evaluate it, and try it again, and again, and again. Just keep going.'

## **The value of shared ownership in challenging times**

By the end of 2015 the chemistry teacher and the head of Māori had left the team (one had other commitments and the other went on maternity leave), and the head of history had announced that she, too, would be going on maternity leave early in 2016. This left only one of the original four team members. However, because the TLIF inquiry was designed to be part of a larger piece of work at the whole-school level, the board and principal were committed to its continuity. And because the inquiry team had worked from the start to build wider school ownership there were other teachers who understood the inquiry, had read the associated literature and were interested in being part of the team. And because there were two leaders rather than just one who were committed to the project, there was one project champion still at the school. The two leaders worked together to plan for its successful transition.

## **Planning for transition and induction of new team members**

The team leaders worked together on how to go about recruiting two new teachers for the team while making the best use of the remaining time the head of history had at the school before going on maternity leave. Attending Flipcon15 together at the end of 2015 provided them with ideas they could apply to their

own school context and, just as importantly, with time away from school to reflect together on the inquiry so far, and to “think forward” about next steps, particularly in the light of their changing team.

While the loss of three team members was disappointing, the DP viewed the experience as important in that it prompted them to reflect on *who* to include on the team and *how* to include them. It was important to “get the right person”, in terms of their commitment, their skills and, most importantly, how they were perceived by staff. The team leaders aimed to induct people who were respected by other staff, had strong pedagogy and who differed in personal style so that the staff had a range they could choose from when they needed help. The team leaders had learned from experience that it was also important *how* to induct the new people.

For the first two weeks of 2016 the head of history continued in a paid role but did not have a class so was able to continue work on the inquiry and help with the transition process as two new staff members were inducted on to the team. (At the end of 2015 one of the PE teachers and another history teacher joined the team.) During this time she developed a flipped learning site for staff with links to video and YouTube clips, and a guide for staff which the new team members found useful in getting up to speed. She then went on maternity leave but has kept in regular contact with the team and continues to provide support by email. The fact that she had an established working relationship with the other team leader and was deeply committed to the inquiry also meant that she chose to maintain regular contact with the team via email while away on maternity leave which maintained some level of continuity.

### Three South Wellington schools inquire into co-teaching

The Newtown, Brooklyn and Berhampore Schools’ inquiry was about shifting teacher practice through co-teaching in mathematics with the ultimate goal of raising student achievement. The focus was on teacher learning with an underlying assumption that student learning is both the primary object of teacher learning and a resource to inform it. The inquiry was led by a team of four teachers including representatives from each school and an education lecturer who had recently been a teacher at Berhampore School and was in the process of completing her PhD when the inquiry began. In addition to the lead teachers, the inquiry also involved a group of teachers from each of the three participating schools who were exploring co-teaching in their classrooms. The lead teachers of the inquiry team already knew each other prior to the TLIF inquiry—all were mathematics lead teachers in their schools who met termly for mathematics lead teacher cluster meetings—and several had worked together. The three schools were also connected through their membership of SWELL (South Wellington cluster of schools). The inquiry team also made use of a mathematics facilitator to provide PLD in response to emerging inquiry needs.

#### **Building shared ownership within and across schools**

The lead team was aware that, because the inquiry involved teachers from three different schools, they would need to set up systems to ensure they all stayed connected and that the project maintained momentum across the three sites. One of their main priorities at the planning stage was to put these systems in place.

#### **Shared ownership within the lead team**

The lead teachers of the inquiry team had discussed their shared interest in the impact of co-teaching on practice before the TLIF was established, and two of them had already tried it. The lead teachers therefore had shared ownership of the inquiry from the start. To ensure they maintained this shared leadership of the inquiry the lead team developed a set of protocols or *kawa* on how they intended to work together as a lead teacher team. The protocol included: “Honesty (shared responsibility for a safe environment);

Proactive participation (seek clarity, share ideas); All being learners (risk taking, innovation, ideas, learning from mistakes and successes); Respectful, constructive communication (active listening, focused attention); Transparent collaboration (balance of ‘who knows what’); Accountability and timeliness; and Fun.” The lead teachers considered that, even though they already worked in the ways described in the protocol, there was value in taking the time to discuss and write them down as a team.

We were already working in those ways [protocol]. But writing it down actually shifts something. Writing it down, saying it aloud together—it’s making an agreement. There’s something in that.

The lead team also planned at the proposal writing stage for two full-day meetings two times each term to discuss the overarching inquiry goals, and to share, reflect and plan in relation to these goals. The lead team also planned from the start to include the principals of each school in these meetings to help build cross-school ownership of the inquiry (although only two of the principals were able to attend on a regular basis). They saw these meetings as essential to the success of the inquiry.

This day is crucial for that. You would not get that [shared sense of leadership] if you did not meet. It’s a long time [a day]. It’s a commitment, but if you didn’t have that you wouldn’t get traction.

### **Shared ownership within each school**

The lead team was also conscious of the need to develop ownership of the inquiry *within* each school, and engaged in processes within their schools to help build this a school level. Each school team developed their own protocols or *kawa* for how they intended to work together. Like the lead teachers, the teachers in each school team saw the value in making explicit their intended ways of working.

When we first did the *kawa* at our school one of the teachers said, ‘This is just silly.’ And then about three weeks later she said, ‘I’m so glad we set this up’ because it set a tone. You know, the tone just changed— [It was] the value of that *kawa*.

The lead team considered the teachers in each school could own the inquiry because there wasn’t one ‘fixed’ way to carry out co-teaching and because each school could develop their own models and ways of working according to their context.

There are no rules about, ‘Well you must do this, and then you’ve got to do that, and then capture it this way.’ So there are no rules about that.

It’s a little bit different for every school even though we’re working together.

The model is responsive and flexible. Each school has been able to generate and refine. The whole structure has been built around revising and refining so each school at different times has altered different things about how they’ve enacted this [model], but the principles have remained the same.

### **Shared ownership across school teams**

To ensure shared ownership across the schools, the lead team planned at the proposal writing stage four full-day meetings for all the inquiry team teachers from each school to share what they were learning with each other. They also arranged for the external mathematics expert associated with the project to be available on those days to respond to emerging project needs.

The whole-team meetings—they’re key. That shifted a lot of people from owning it a bit to owning it a lot. They came away from those meetings highly energised and nourished.

They [the team meetings] are really intense, and it’s really expensive. If we didn’t have TLIF funding to meet together twice a term for a full day and once a term for 30 teachers it would fall over.

The meetings were designed in response to the experiences teachers were having in the schools, which also helped all teachers feel a sense of owning the inquiry.

They [the teachers] have made quite a lot of different suggestions of what we could do and I think that builds ownership.

Those days are really responsive as well. The programme [of the day] is driven from the experiences the teachers are having in the schools so it's really iterative.

They realise, ok they're not in the lead team but still their opinion matters—I mean they're the ones that are running it really.

Members of the lead team had noticed that, over time, the school divisions had dissolved.

Last time we got all our schools together, I was really aware that there'd been a shift from teachers tending to choose to sit together with their own schools. In fact there was one point in which teachers were encouraged to choose an activity to go and work in a group and in *every* group there was a mixture of teachers from the three schools. And we wouldn't have seen that in the first day.

The university lecturer provided a “common thread” in that she visited all of the schools to participate in the inquiry meetings, share from the literature and gather data. This cross-school perspective was useful at the team leader meetings, and the lead teachers described her contribution as “the anchor” of the inquiry.

It's good that [university lecturer] comes to our schools and is part of our team meetings. It's good to have an anchor.

### **Shared ownership with whānau across schools**

Attempts to build cross-school connections and ownership of the inquiry also extended to the inclusion of whānau. The inquiry involved opportunities for the whānau of the focus students to meet and share their observations of their children as a source of data for the teachers to use when exploring the impact of their practice on students as mathematics learners. Rather than run one whānau meeting for each school, the lead teachers decided to offer meetings at three different times that whānau from all three schools could choose from. This approach brought several advantages. One was that parents had three choices of time to attend. Another was that each meeting involved whānau from more than one school so parents had the opportunity to talk with parents from other schools in the area.

Within those meeting there were some cross-conversations. The intention was to get parents to create their own conversations and they did. We had parents talking across schools about what happened in *their* school. We've decided to do it again for the next meeting.

The focus for the next whole-team meeting for teachers was the ‘disconnect’ between home and school which was to be facilitated by the maths expert associated with the project. In response to the success of their cross-school whānau meetings the lead teachers had decided to invite the parents of the focus students to attend the upcoming session for teachers, in the hope that they could then share what happened with other parents at the next cross-school whānau meeting.

Hopefully there will be a few parents represented from each of the parent meeting groups so that when we engage them in the next conversation meeting for whānau, there'll be some of them who came and joined us on the day to explore solutions around the connection between home and school.

### **Sustaining collaborative inquiry across schools**

There had been no changes to the lead teacher team and the lead teachers considered that, even if one of them did leave, all three schools would continue to be involved in the inquiry, because the structures they had set up would ensure this. It would be possible to replace one of the lead teacher team with another teacher from their school who was involved in the inquiry because of the strong ownership of the project both within and across the schools and because the principals of the schools supported the inquiry.

The teachers saw the main challenge to sustainability being the ending of the TLIF funding which enabled them time out of the classroom to meet together, and had started to consider how they could continue when there was no longer funding to cover release time so that the teams could meet together. They saw having the support of the principals of each school as important in terms of valuing a focus on shifting teacher practices.

I think one of the advantages of having the three principals on board is that it gives the inquiry importance. What is given importance is what happens in a school. That will help us next year when we don't have any funding.

That's when the principals come in too, because they can think about different structures and arrangements for staffing.

The principals caring about it and seeing that it's changing children's learning is what's going to make it keep happening.

The lead team also observed the role of the principals in allowing the spread of co-teaching as a means to support teaching that impacts on learning.

There's like 16 teachers in our school and only 6 are co-teaching. Having the principal talking about co-teaching, it's *valued*. So even if you are not participating in it, the language is still rich in our school.

Having the principal part of the journey—being able to support its spread across other subjects.

### **Benefits of cross-school collaborative inquiry and what made it work**

The lead team considered there to be several benefits of engaging in a cross-school collaborative inquiry. These included opportunities to break down potential barriers between schools and to learn from each other.

We actually have to lower some barriers. It forces you to really address, 'What are the issues bubbling up in *your* school? What are *your* parents saying? What are *your* children saying? What are *your* teachers saying? And are they the same?' I think we're more focused on the, 'Oh yeah, that reflects what we found as well but in a slightly different way.'

Everyone feeds in from the literature and their different experiences—our outside learning. We've benefited from what another school has done and can bring to the table.

The lead team considered that there were several reasons their collaboration across the schools had been effective. One was that the members of the lead team had pre-existing relationships and support from the principals of all three schools involved.

It's about pre-existing relationships.

We had active buy in from three principals and we had pre-existing relationships around this leadership team. We didn't have an active working relationship among all of us that was current, but we had some active working relationships across the schools.

Another was that when the team developed the proposal they had carefully planned a structure to make the collaboration across schools work, and the structure was evidenced-based.

The structure was what made it work.

It was really *carefully* structured. When we wrote the proposal that was the bit we really nussed out together—how to get the structure bit so that we were genuinely collaborating across the schools.

It was [using] the emerging findings from the PhD [that the expert working as part of the team had recently completed], and using structures that were already working at Berhampore. All of it was done purposefully from an evidence base, whether it was evidence from the literature or evidence from experience.

A third was that the lead team was intentional from the start of the project about how they wanted to work together.

I think the *kawa*—being explicit about setting the protocol was a big part of that. That part at the beginning when we sat down together and said, ‘We’re all here to learn.’

I think very careful planning in the way that we meet and talk openly together is really, really important.

There is good practice in all the schools to have those open honest conversations in a way that works and is refreshing. It takes us out of our little islands.

And, finally, but perhaps most importantly, the lead team deeply understood the inquiry process going on at different levels of the project and regularly reflected on how it was working.

There are many parallel cycles going on. There’s the co-teaching between a pair within a school, there’s the school, there’s the cross-school, and the cross-school leadership. The principle is that we do something because it’s worth doing, and then we reflect on it, and refine it, and we do it *together*. That’s the principle that overrides everything. That notion of inquiry is really badly understood, but that is essentially going on at multiple levels, and across, and between, and within contexts.

Being reflective if something doesn’t work, rather than just saying, ‘I’ll bin it.’ The reflection time is really important so you can be flexible within the project.

## 6.

# What can be learned from the TLIF inquiries?

Effective inquiry requires teachers to think and act systematically in implementing an innovation. It involves teachers observing what is happening for learners, thinking about their own practices in relation to what is happening, wondering what practices might be more productive, exploring these by doing things differently in the classroom and then checking on the impact for learners. It is hard—for anyone—to think differently about their ways of working, but there seem to be a number of factors that help a project team to be able to do this. From their experiences when monitoring the Round One projects, the TLIF monitors identified four main themes or factors that seem to ‘matter’ in effective teacher-led inquiry. These included the ways teachers worked with external experts, engaged with the community, responded to evidence and the dynamic nature of inquiry, and established strong teams with shared ownership of the inquiry. In this chapter I summarise what can be learned from this research in relation to each of these four themes. As the research was carried out early in the life of the inquiries, the case studies provide early insights into initiating practices in promising projects, largely without yet line of sight to outcomes.

### Working with experts

The ways in which teachers worked with experts was one of, if not the most, important factor for carrying out an effective inquiry. The use of experts was effective when teachers:

- had thought deeply about their inquiry question and the support they would need to answer it (this meant they could seek expertise that matched their needs)
- sought support from experts with whom they had prior working relationships (because they already knew them and had established ways of working together)
- consulted with the experts about their needs and what the expert could offer before committing (to ensure a shared understanding about what the relationship would involve)
- involved the experts in shaping the inquiry question and design at the proposal writing stage (this shared work meant that they had a common understanding of the inquiry)

- maintained leadership of the inquiry with the expert either filling a gap in the expertise of the team by participating as a team member or by taking an 'insider-outside' mentoring role
- changed their use of experts in response to evidence (i.e., as their needs changed they worked with their experts in different ways or drew on different experts).

The TLIF monitors themselves also acted as experts in their monitoring role, supporting teams to pivot and make changes in the direction of their inquiry when this was needed.

### Collaborating with community

Working with members of the community to help determine and answer inquiry questions was the least well understood and most difficult goal to achieve. However, effective collaboration with community had the most potential to transform practice. Collaborations with community tended to work well when teachers:

- already had well-established community connections and knew the expertise held in the community (or knew who to ask to find it)
- engaged with community members for their skills and knowledge rather than to 'teach', 'inform' or gain 'buy in' from the community (although these outcomes often occurred as a by-product)
- worked with community members to identify an inquiry question of shared importance
- needed the expertise of the community to carry out the inquiry (i.e., the inquiry could not be undertaken, or undertaken as well, without the school/community collaboration)
- used contributions from community members to inform or change the direction or activities of the inquiry
- personally invited community members to contribute to the inquiry rather than issuing a general invitation
- sustained collaboration with community members through all stages of the inquiry, from inception to dissemination.

### Responding to evidence and the dynamic nature of inquiry

Teachers who took an evidence-based and dynamic approach to implementing their inquiries tended to:

- understand that the inquiry involved examining their own practices
- work in schools with an existing culture of inquiry and a school leader who understood and supported the conditions needed for inquiry
- have prior experience of engaging in teacher-led inquiry (usually through involvement in a PLD contract or in school-initiated inquiries)
- design inquiries that were part of, or contributed to, bigger school-wide inquiries
- start with an inquiry question that they genuinely did not know the answer to (rather than one in which they set out to find evidence to match a preconceived answer or solution)
- create and explore innovations to meet context-specific needs (as identified in their data), rather than using a pre-existing programme or package
- draw on evidence of the impact of practice on learning from a range of sources (e.g., observations, student work, video recordings) and not just student achievement data
- have regular team meetings to collaboratively reflect on their findings and plan what to do next in response to those findings
- be flexible, quick let go of or change approaches that did not work, and able to tolerate uncertainty
- maintain sight of the end goal, big picture, vision or purpose while remaining open to different ways of getting there.

## Strong teams with shared ownership

Strong teams with shared ownership of the inquiry tended to:

- be made up of people with the capacity to collaborate, share ideas and who had the respect of other staff not directly involved in the inquiry
- have clearly defined roles allocated from the start of the inquiry
- share leadership across the team
- have included all or most of the team members in designing the inquiry
- have designed, at the proposal writing stage, systems and structures to support collaboration across the inquiry team and the school
- have set aside time to make explicit the ways in which they intended to work together in the form of protocols, kawa or memoranda of understanding
- have budgeted time for all team members to be released from the classroom to meet together regularly for reflecting on findings and shaping next steps
- be open to teachers taking different approaches to inquiry innovations rather than promoting the 'one right way'
- have school leader and board support.

## Four themes working together

In this report I have highlighted a particular strength of each inquiry team in relation to the four main themes identified by the TLIF monitors. However, as evident from the vignettes, the themes are in fact interrelated, and strength in one theme contributes to strength in others. Teachers working effectively with the 'right' expert, for example, are better able to collect, analyse and respond to a wide range of evidence. Teachers who work closely with community are less likely to jump too quickly to the 'solution', and more likely to consider the problem, the evidence and possible responses from different perspectives. Teachers who are responsive to evidence and the dynamic nature of inquiry are able to change their use of experts or the way they engage with community, in ways that help move the inquiry forward. And strong teams with shared ownership of the inquiry are more likely to choose and use experts in ways that meet teacher needs emerging from the inquiry.

# 7.

## Where to next?

The TLIF provides opportunity to engage in an inquiry that is not necessarily about making grand knowledge claims for the world but about bringing to life the inquiry cycle with all its twists and turns. It is about making the process of effective inquiry concrete, visible and to the fore, as teachers think about how their practices impact on student learning. The findings of this research early in the life of the first round of the TLIF inquiries suggests that the fund is taking us into a fluid, dynamic, interesting space which might enable us to begin to crack some persistent puzzles of practice that we have not been able to solve through other means. Because the TLIF provides permission to explore (systematically with some accountability) it has enabled some schools to walk a journey that they may not have otherwise embarked on, and enabled them to tolerate a level of uncertainty that they otherwise may not have been able to countenance.

TLIF creates a space where the tacit knowledge of teachers can be brought into the open and put to the test. The fund provides teachers with the opportunity to slow down and think in more sophisticated ways. In doing so it is building a pool of more sophisticated curriculum and pedagogical thinkers. TLIF is making available to *everyone* the opportunities that, until now, only some teachers have been able to access.

However, the ultimate goal of TLIF is not just for teachers to *initiate* inquiries into practices that have the potential to assist learning but also to *share* 'what works' with others in the teaching community. The success of TLIF as an initiative relies on evidence that this is being done locally, regionally and nationally.

At the time of this research, some teachers were thinking about spread. The concept of 'spread' is a tricky one, and begs questions about *what* it is that could or should be spread. Is it the *content* of the TLIF inquiries that might be spread? And if so how do we mitigate against the risk of producing a whole lot of small, disconnected, action research projects that end once the funding stops?

A related challenge is that TLIF is supposed to be supporting people to come up with innovations that are a best fit for their context and for teachers to think about what's going to suit their learners and their needs in their schools. It promotes quite specific innovations that might not be generalisable to other schools. It will be important to look at some way of assisting inquiry teams to identify those things that are generalisable across contexts and those things that are specific to their school. And it will be important to support schools looking to draw on the findings of other inquiries to first find out if the

innovation is *appropriate* for their school, and then how to adapt or transform it for use in their context. Or is it the *process* that might be spread? Maybe what we are trying to spread is how to design a context-specific inquiry. This would involve supporting schools to tell the story of why they did what they did, as well as look at those things that are transferable across schools and communities of practice. The story of running the inquiry—the narrative of how it actually worked, and the conditions that enabled it to work—may be valuable for others wishing to engage in productive teacher-led inquiry in their own school contexts. The research literature tells us that collaborative inquiry is one of the most effective ways of enabling teachers to make changes to their practice in ways that can impact on student learning (James & McCormick, 2009; Katz & Earl, 2010). Teachers who engage in their own research are also more likely to engage with external evidence than those who are not (Nelson & O’Beirne, 2014).

Effective teacher-led inquiry is not just important at the individual class or school level. Effective teacher-led inquiry is also important for the system as a whole if we are to crack persistent problems such as inequities in learning opportunities and achievement for particular groups of students. Cracking these problems requires us to find ways, not only of implementing *current* practices more effectively, but of developing *new* ways of meeting the needs and drawing on the resources of students for whom current practices—no matter how well they are implemented—are ineffective or even harmful. The literature tells us that such innovations are most likely to be found at a grassroots level, in the classrooms of curious and courageous teachers inquiring together into how to develop such innovations of practice. Charles Leadbeater, for example, argues from his work in local government that:

Next practices—emergent innovations that could open up new ways of working—are much more likely to come from thoughtful, experienced, self-confident practitioners working in partnership with other professionals and collectively trying to find new and more effective solutions to intractable problems. (Leadbeater, 2006)

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