

Implementing a teacher-led inquiry: What matters?

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What makes teacher-led inquiry effective? The team responsible for supporting teachers with the TLIF (Teacher-led Innovation Fund) projects considers that ‘what matters’ includes the ways teachers work with external experts, engage with the community, respond to evidence and the dynamic nature of inquiry and establish strong teams with shared ownership. This brochure tells the story of four TLIF inquiries with strengths in each of these areas. The stories come from a recent research project carried out by the New Zealand Council for Educational Research (NZCER) for the Ministry of Education on the Round One Teacher-led Innovation Fund (TLIF) inquiries. Although it is too early to comment on the inquiry outcomes, the stories outlined here provide early insights into initiating practices in promising projects.

Working with experts

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

- had thought deeply about their inquiry question and the support they would need to address it
- sought support from experts with whom they had prior working relationships
- consulted with the experts about their needs and what the expert could offer before committing
- involved the experts in shaping the inquiry question and design at the proposal writing stage
- 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-outsider' 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.

The following story describes how the teachers from an Auckland secondary school chose and worked with two main experts to support their inquiry into the impact of authentic learning.

EXAMPLE: Alfriston College

Alfriston College wanted to explore 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 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.

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 before and who understood the nature of the school and what the teachers were trying to achieve.

The other expert was a facilitator in Modern Learning Environments (MLE) known to 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.

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. The whole process took several months

during term four, and the project leaders considered that this was time well spent.

The two experts had different roles and worked with the inquiry team in different ways. The MLE facilitator designed and delivered professional learning development (PLD) at a whole-school level and offered leadership support to the project leaders. The PLD was tailored to the needs of the school and designed with input from the team leaders to support the goals of the inquiry. This required the MLE facilitator and the inquiry team to work closely together.

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 helped them see the 'deeper value' in the data they were collecting. She also helped them 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.

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. They expanded the MLE facilitator's role to include giving support in leadership to the whānau team leaders.

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. Having the experts helped the project leaders engage the junior school teachers in the inquiry, helped build a sense of ownership

of the inquiry across the whole staff and gave the inquiry credibility. The experts provided the whānau team leaders with moral and professional support and helped build their confidence.

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."

They 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. 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."

A second case study on teachers' work with experts to help inquire into reducing inequities in mathematics outcomes at Waimairi School can be found in the full report.

Collaborating with community

The least understood and most difficult goal to achieve was working with members of the community to help determine and answer inquiry questions. 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
- appreciated that 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.

The following story describes an inquiry where, not only did community members *participate* in the inquiry, but were the ones to initiate it, in response to a local challenge in the community.

EXAMPLE: Hauraki Plains College

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. The inquiry team 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 three of the school's Primary Industry teachers. The project

was initially intended to include Year 12 students who in 2015 were enrolled in a Level 2 Agriculture course, and aimed to achieve NCEA Level 2, as well as a Vocational Primary Industries award.

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 engage the right kaumātua. The school staff understood the need to respect the process but found the delays hard. They also described feeling anxious about the pōwhiri, and worried that they “wouldn’t be getting it right”. However, they found the iwi very supportive of them and of the students’ involvement.

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. It was a challenge to find times when industry experts from the farming community were available and the teachers were very aware of the mismatch between school timetables and how members of the community work.

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. The Primary Industries teacher had 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 as the older students left the school.

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.

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

Responding to evidence and the dynamic nature of inquiry

For many teachers, taking an evidence-based and dynamic approach to their inquiries is a risky business, and takes courage. Teachers who were able to take an evidence-based and dynamic approach to 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, quickly 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 of the inquiry while remaining open to different ways of getting there.

EXAMPLE: 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 LEOTC 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.

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 or to deliver the standards in a way that they thought would engage their students. At this point 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.

The lead teachers realised that, in the first instance, the most fruitful focus for their inquiry would be student experiences and engagement, with their initial idea of exploring the impact of cross-curricular, marae-based learning as a possible subsequent inquiry.

On visiting the marae, the lead teachers also 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”. And they began to see how teacher learning could 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?

The teachers also 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, and hoped that other schools would find their inquiry learning useful.

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. They also worried about whether their new direction would be of value to others beyond their school. However, the inquiry expertise and support, offered by their TLIF monitor, enabled them to tolerate their uncertainty. As one of the teachers observed, “Sometimes you just need a little bit of clarity and reassurance.”

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 try others. They had a shared vision and a commitment to what they were trying to achieve, they were committed to the iwi representative and his vision for marae-based education and, through their work with him, they were also shifting their own perceptions.

Strong teams with shared ownership

Strong teams with shared ownership were important for sustainability of the inquiries. Such teams 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/kura
- 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.

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.

What follows is the story of an inquiry with shared ownership across three primary schools.

EXAMPLE: Newtown, Brooklyn and Berhampore Schools

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. It 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. 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 knew each other prior to the TLIF inquiry from 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).

Because the inquiry involved teachers from three different schools, the team knew they needed to set up systems for staying connected and maintaining momentum across the three sites. This was a priority at the planning stage.

To ensure they maintained shared leadership of the inquiry, the lead team developed a set of protocols or kawa on working together. They saw value in taking the time to discuss and write the protocols down as a team. The lead team also planned for two full-day meetings two times each term to share, reflect and plan in relation to the overarching inquiry. They included the principals of each school in these meetings to help build cross-school ownership of the inquiry.

The lead team was also conscious of the need to develop ownership of the inquiry *within* each school. 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. This process made clear that there wasn't one 'fixed' way to carry out co-teaching and that each school could develop their own models and ways of working.

To ensure shared ownership across the *schools*, the lead team planned four full-day meetings for all the inquiry team teachers from each school to share what they were learning with each other. An external mathematics expert associated with the project attended to respond to emerging project needs. Members of the lead team observed 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 also provided a 'common thread' across the schools through participating in each school's inquiry meetings to 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.

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. 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. This altered the power balance between teachers and *whānau* because not all teachers and all *whānau* at each meeting were from the same school, making it easier for parents and teachers to have frank conversations with each other.

As a result of the success of that approach, the lead teachers decided to invite the parents of the focus students to attend the upcoming session for teachers. The hope was that they could then share what happened with other parents at the next cross-school *whānau* meeting.

The teachers started to consider how they could remain connected when there was no longer TLIF funding to cover release time. They saw the support of the principals of each school as important in terms of valuing a focus on shifting teacher practices. The lead team also observed the role of the principals in allowing the spread of co-teaching across to other teachers and learning areas within each school.

The lead team considered that their collaboration across the schools had been effective because: the members of the lead team had pre-existing relationships and support from the principals of all three schools involved; they had carefully planned a structure to make the collaboration across schools work, they were intentional about how they wanted to work together and they deeply understood the inquiry process going on at different levels of the project and regularly reflected on how it was working.

A second story on teachers sharing the ownership of an inquiry into flipped classrooms at McAuley High School can be found in the full report.

Four themes working together

This brochure highlights a particular strength of four teams in relation to the four main themes identified by the TLIF monitors. However, as evident from the stories, the themes are in fact interrelated, and strength in one area 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.