Chapter 1: Introduction

What is teaching as inquiry?

The teaching as inquiry (TAI) approaches described in this book are closely connected with the purpose of changing the life chances of young people. TAI has, at its core, the purpose of redressing inequity while simultaneously enhancing the quality of teaching and learning. It is based on previous findings that indicate the important role that curious leaders and teachers play in making a difference for their learners.

TAI is an approach to teaching—not an add-on or something extra that teachers are expected to do. When implemented as part of teaching, it supports teachers to be more effective in planning, teaching and reflecting on what they do, because it requires a specific focus or decisions and actions (see Figure 1). TAI is more of a mindset towards teaching, where students' needs are central and refinements to teaching are continuous.

Educators with inquiry mindsets are continuously searching for refinements to their practice and are comfortable with the fact that there will inevitably be a range of outcomes in response to their efforts. Rather than searching for *solutions*, inquiring teachers continuously seek *improvements*, knowing that there are always alternative ways of doing things. They sidestep the idea that "I already do that", because they know there are always other approaches and they are concerned about their learners' progress. This has been recognised in the New Zealand education system for some time, and is reflected in the

curriculum documents and has been the subject of ERO evaluations (ERO, 2010, 2012).

The New Zealand Curriculum states that the process for TAI involves teachers monitoring and reflecting critically on the impact of their decisions on student learning (Ministry of Education, 2007, p. 35). The approach taken to TAI in this project was more specific than the curriculum implies: although TAI was introduced to the teachers as a frame of reference for considering changes to pedagogy to support the aspirations of *The New Zealand Curriculum*, teachers were asked to specifically focus on the needs of four to five priority learners in order to manage and monitor the effects of the changes they made more effectively.

Figure 1: Teaching as inquiry in action
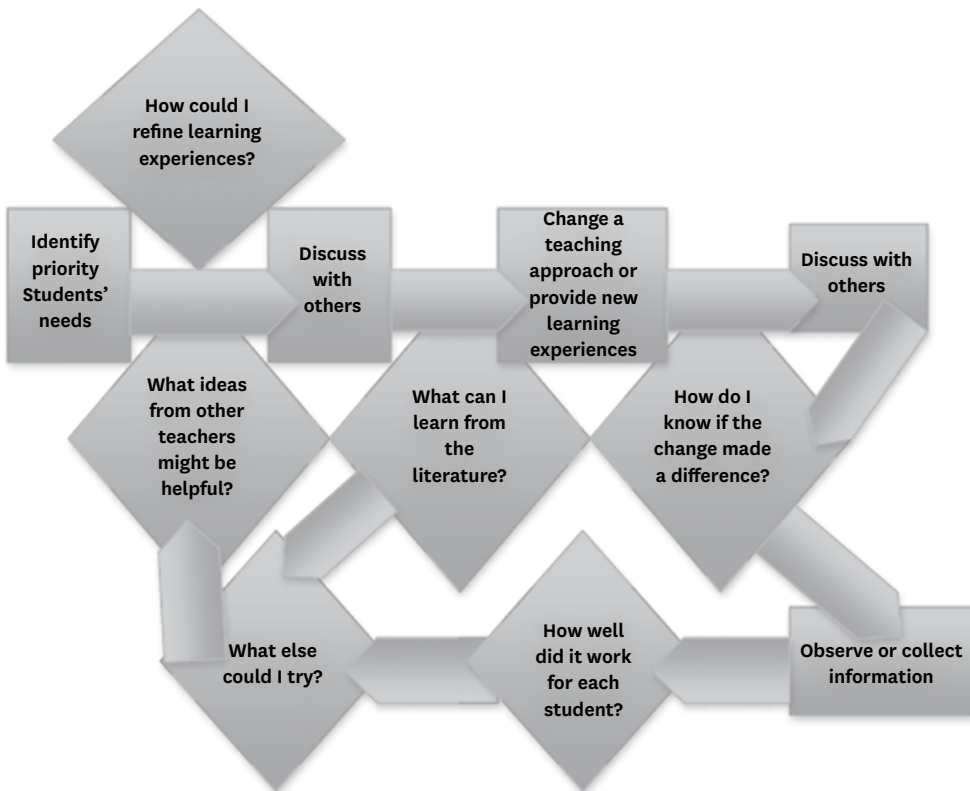
Visually, the process of TAI for priority learners is represented in Figure 1. This representation differs from previous diagrams of TAI (Halbert & Kaser, 2013; Ministry of Education, 2007; Timperley, 2011b) in that it promotes decision making *and* action as core elements in the ongoing cyclical process in relation to priority learners. This is because the evaluation of TAI undertaken by ERO (2012) indicated that where inquiry is working well, all phases of the inquiry cycle are occurring.

Identifying student needs is only the first—and probably the easiest—step in TAI as teachers learn to use a range of classroom diagnostic and formative tools. The ERO evaluation discussed how teachers and leaders were stronger at identifying the needs of students than they were at identifying, planning and taking action, and evaluating changes in learning. The report stated that there was a need for leaders and teachers to:

1. draw on a wider range of research and/or effective practice when they designed programmes and interventions for learners

2. make better use of evidence when they evaluated outcomes for learners and the programmes and initiatives they had put in place

3. use the information they had about students' learning strengths and needs to design appropriate professional learning and development opportunities for teachers. (ERO, 2012, p. 1)

The ERO report also discussed how disappointing it was to see how the support in schools for TAI had declined in some of the schools they evaluated between 2009 and 2011. This may have been because there was an assumption that teachers would drive their own TAI but this was not necessarily the case. This assumption underpins why the Secondary Student Achievement project was supported by the Ministry, which recognised that teachers needed ongoing support to develop the skills and implement complete cycles of TAI. Leaders in schools did not necessarily have experience with TAI, nor did they know what teachers needed to sustain them longer term. Therefore expert subject facilitators (advisers) provided guidance at multiple levels to seed ideas about changes in teaching and to sustain teachers' focus on the evaluation of their efforts.

In the Secondary Student Achievement project, TAI places the students' needs as the starting point (Figure 1). In this project the facilitators worked with the teachers and middle leaders on all of the diamonds in Figure 1. The idea is to start with observations or identify what students need, then develop your own inquiry by asking questions directly related to making changes to teaching, based on the needs of the learners. Rather than recycling generalised solutions, teachers figure out how they can make a difference for their priority learners. There will be a range of ways to know if their changes in teaching have made a difference, by observing student behaviour or by collecting examples of student work.

Teachers, as participants in TAI, are continuously curious about how they know they have made a difference. They also seek information—from significant other people (including facilitators and colleagues), the literature, and other sources of inspiration. They then take action by making a change in a teaching approach. Thus there are cycles of observation and evidence of outcomes, and these are linked to continuous efforts to refine approaches to teaching.

Through our observations in this project we are convinced that individual teachers can undertake TAI by themselves and make a difference for their students. However, there is much more educational 'lift' when teachers have input on possible actions or are guided. Therefore we wanted to consider how individual teachers and supports within a school-wide implementation of TAI enabled school-wide change, since schools as educational entities are very keen to progress how, as a school, they are making a difference. School-wide educational lift will be faster and potentially more effective when teachers share their development as part of the professional learning environment within a school (Timperley, 2011b).

Also, it seems important to support specific subjects with targeted facilitation, and to support teachers with context-relevant advice so that they become familiar with TAI processes. The value of developing TAI initially with middle leaders should not be underestimated. This is because when middle leaders 'get it', and understand TAI in more depth, they are more likely to be able to support other teachers. The facilitation support should therefore relate to the specific knowledge and experience of the teachers involved. In this project, the facilitators

were very aware of the way their subject knowledge and professional knowledge could support teachers and middle leaders to grow professionally. As one middle leader in a rural school stated:

> I feel that a can-do attitude has been fostered through quality professional dialogue, a narrow and deep focus on target students and continued reflection around these individuals. Tools and resources have been provided to assist the achievement of this group and I have found that although the target is a small group, the wider cohort all gain the benefits of the project and assistance I am being offered. (School leader)

The subject-specialist facilitators were pivotal in initiating and supporting the whole TAI process (Figure 1). (There is a more detailed discussion of this in Chapters 5 and 6.) While the role of the subject specialist facilitators was to guide and support teachers' professional learning, essentially they:

- helped teachers to identify what their priority students' needs were
- as a consequence, helped the teachers to identify their own professional needs, provided resources to support specific pedagogical interventions, and enabled the teachers to reflect on how they knew whether the intervention had made a difference
- invited the teachers to provide success stories.

An example of a teacher's success story shows how she developed aspects of the TAI cycle with the assistance of her facilitator.

Success story: Geography class

At the beginning of 2013, and after I pre-tested my geography Level 3 class, I realised that I needed to focus on a target group of six students: three Māori and three Pākehā, three females and three males. My subject facilitator observed me each term and conducted interviews with my target students. Based on students' weaknesses of basic geography mapping, graphing, concept description skills and history paragraph and essay-writing skills, I offered scaffolding for planning, used graphic organisers, established 'peer panel' marking as a daily lesson practice, gave lots of homework and modelled answers. As a result my target group built core geography skills, conceptual under-

standing, and I kept differentiating tasks, as my facilitator suggested, to help the new-to-the-subject students. The outcome was that four of my target students gained an Achieved grade in the first internal achievement standard, one gained Merit and one Excellence; also they gained two Achieved and one Achieved with Merit grade in the first mock examination.

The model in Figure 1 is open ended in that any one of multiple aspects of teaching and learning could be chosen as a focus. Subject specialists were able to provide suggestions for what teachers could focus on for their TAI, but this had to be based on students' needs. There could be multiple ideas to address the needs of priority learners. Fullan (2007) uses the term "simplexity" to describe the fact that we want better student outcomes but achieved in the most effective way possible. What has been applied in one context and its outcomes can inform another context, but the students in one setting will be different and their backgrounds will be different to those in another setting. Therefore, teacher actions must be student and context based. We recognised this at the outset and therefore sought case studies to illustrate how teachers addressed these issues in their particular contexts.

Interestingly, the teachers discovered that while they can learn good ideas from their own interventions and from others, transfer of specific interventions does not always work. Some of the teachers were confronted with their assumption that what worked in one context should work in another. This applied especially when they had experienced success related to the changes they made in the 1st year of implementation. As a consequence, some teachers had to rethink the application of their teaching approaches in the 2nd year in relation to the specific needs of their current students.

It seems that very few studies have investigated the specific links between changes in teaching and consequent changes to student outcomes (Desimone, 2009; Timperley, Wilson, Barrar, & Fung, 2007). This is because establishing direct causal links between teacher and student learning is problematic since it downplays the complexities inherent within teacher and student learning. There are not necessarily repeatable causes and effects related to the specific changes teachers make: often changes are context dependent and therefore not

transferable. This is understandable when student needs come first, since student needs (even for the same student) are highly likely to vary in different learning contexts. However, the process of TAI can be used in any teaching or learning situation.

Other studies on the PLD of teachers have shown that where teachers were able to reflect, choose an area for their own development (Turvey, 2013), access new ideas and share their experiences through a TAI process, their growth, wellbeing and success were enhanced (Hargreaves, 1994; Muijs, Day, Harris, & Lindsay, 2004). In their introduction, Halbert and Kaser (2012, p. 4) describe TAI as being flexible and tailored to learners' needs:

> Inquiry is not about the pursuit of the perfect question or the next exciting project. It is about being open to new learning and taking informed action. Innovation is not about sprinkling initiatives like pixie dust, hoping they will stick nor is it about what is new and groovy. Innovation is about recognising that old forms are not working for all learners, identifying what the key needs of our learners are, and then creating new forms based on knowledge about what does work.

Evaluating professional learning in terms of the multiple impacts of the changes at different levels within a school (and for a wider professional learning project) is worthy of serious attention (Muijs et al., 2004). There are likely to be complex ways of improving both equity and quality (Blankstein & Noguera, 2015) of student outcomes that need to be figured out, with the context taken into account. Therefore this study considered cases and vignettes of longer-term changes in teachers' thinking and actions, alongside changes in the way subject specialist facilitators and schools were enabling professional learning related to improving priority students' learning.

What is becoming apparent from this project, and the literature, is that teachers who have changed their pedagogies in response to the needs of their students, and who have observed positive student changes as a consequence of these changes to teaching, consider this as success that propels them to consider their next iteration of change. In this way, teacher agency can be developed (Conner, 2013; Turvey, 2013). Although improving student outcomes is the primary motivation for teachers, teacher change through TAI as professional learning

requires deep intellectual and emotional investments from teachers, and it takes time (Timperley, 2011b). In particular, teachers need to have identified specific teaching problems or issues related to student learning that drive their "need to know" (Timperley, 2011a). Teachers will have different previous experiences and capabilities related to evidence-informed and evidence-generating practices. This means different teachers may need different levels of support for different stages of the TAI process (Figure 1).

Professional learning should benefit individuals, groups or schools to enhance the quality of educational outcomes (Day, 1999). There is a moral imperative to do so. Renewing and extending teacher knowledge, skills and thinking can occur through individual or collaborative efforts that are designed to implement approaches for enhancing students' learning experiences. For TAI to be effective it has to be a collaborative effort between the "student, teacher and organization" (Timperley et al., 2007, p. xiii). Therefore, any evaluation of TAI must take account of both the direct and indirect effects of teacher changes on different stakeholders (Muijs et al., 2004). One of the indirect effects targeted in this project was the benefits to the department or school (as well as benefits to the teachers and students), particularly how the teachers' inquiry processes and successes contributed to the changing culture of teaching in each school.

What is accepted as usual practice and how teacher learning and change are prioritised within a school—contributes to the school culture. Effective professional development occurs when school structures and school culture support the changes that are needed. This requires developing feedback loops for teachers and leaders to work out what teachers need to support their on-going inquiries. There may also need to be changes to school structures and developmental initiatives to support groups of staff.

A previous meta-study (Timperley et al., 2007) identified 97 research projects that linked teacher professional development to changes in student outcomes. Despite this number, few studies provided detail and adequate reporting of specific PLD and its consequent outcomes for priority learners.

The importance of addressing the needs of priority learners

Since the 1980s some education systems have become less equitable in terms of access to education that can enable learners from diverse backgrounds to succeed. This is a worldwide issue that needs to be addressed urgently. Blankstein and Noguera (2015, p. 7) insist that "demography need not determine destiny, and a child's race and class *can* be decoupled from how well they will do in school or college".

Of prime interest is how (and whether) teachers and schools consider that all students have latent talents that can be enhanced. How educators enable these talents to shine should be the focus of our attention. This will no doubt involve prioritising our energy and focus, as well as our resources. As Blankstein and Noguera (2015) show, striving for success for our most disadvantaged students also requires courageous leadership and commitment to ensuring that every child gets what he or she needs to succeed. They indicate that we have to address the fact that some children are denied the opportunity to have their talents developed because their families do not have the resources (time, knowledge, skills and/or money) to invest in them. TAI can help to identify what students need, and potentially identify steps to redress inequity.

The diversity of students in the New Zealand education system is one of its strengths. We are very fortunate to have a school curriculum that supports diverse approaches and celebrates the fact that teachers can and should focus on the needs of their individual learners (Ministry of Education, 2007). However, this is somewhat daunting when faced with trying to do so for up to 30 students in a class.

There is general guidance for how teachers might work with individual differences, such as *Tātaiako* (New Zealand Teachers Council, 2010a), the *Pasifika Education Plan* (Ministry of Education, 2012b) and *Ka Hikitia—Accelerating Success 2013–2017* (Ministry of Education, 2012a) and its predecessor plan, which have supported school leaders and facilitators to develop and refine teachers' understanding of cultural competence. However, there is still much work to be done so that teachers can understand and identify needs, and be responsive to diverse identities, languages and cultures.

To move this forward, facilitators in this project have supported teachers to make sense of what the five cultural competencies (New Zealand Teachers Council, 2012a) mean for them within their teaching context and to meaningfully integrate the principles into their teaching practice. School leaders are also considering how communication can be more culturally appropriate, how visual components in and around the school reflect a sense of place and belonging, and how relationships among staff and between staff and students can support cultural aspirations. A focus on cultural dimensions at a whole-school level will support school lift in engagement and achievement (Macfarlane, 2004).

The Case for System-wide Improvement (Ministry of Education, 2012c) showed that the demographics of groups in the New Zealand population are changing. In the last census over half (53 percent) of Māori were under 25 years of age, compared with just over a third (36 percent) of the total population. These young people are our future citizens, and we need to prepare them adequately to live meaningful lives. Our future societal development depends on them. The knowledge, skills and competencies they can develop are important not only to them and their communities, but also to the nation.

Currently the general observation that students attending low socioeconomic status schools have lower overall achievement rates indicates that meritocracy is something of a false premise. While the New Zealand National Certificate of Educational Achievement (NCEA)[1] achievement standards provide a framework for inclusion, the achievement rates suggest otherwise. Individual talent and tenacity do not necessarily overcome social obstacles that might avert success.

Also, lower school retention rates for Māori students mean they are under-represented in the later years of schooling and are more likely to leave with fewer school qualifications. There are social reasons for these outcomes (Bishop & Glynn, 1999). Sadly, as much as we might have hoped the developments in NCEA would have moved the education system in New Zealand forward, it tends to reinforce inequity prematurely or inaccurately, making judgments about the ability of children that may actually be exacerbating the achievement gap (Haque, 2014).

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1 The National Certificate of Educational Achievement is New Zealand's school exit qualification, with Level 1, 2, and 3 certificates corresponding broadly to the final three years of secondary school.

Hargreaves (2015) strongly stated this in relation to what teachers in the USA must do, but these sentiments could equally apply to New Zealand teachers and educators more widely:

> To increase the human capital of our students, we must invest in the professional capital of our teachers … America must communicate strong and positive messages about the value of teachers and teaching and also back them up by articulating a compelling vision for America's students and their schools, by improving the working conditions for teachers—especially teachers' opportunities to collaborate with each other—and by according more flexibility to teachers to design curriculum and develop pedagogical expertise together. (Hargreaves, 2015, p. 285)

This statement could equally be applied to the New Zealand education system. Recently the Hechinger Report (Bailey, 2014) indicated that providing teachers with more time to collaborate yields better outcomes than extending the learning time for students who are not achieving well. It also indicated that when teachers take the time to get to know their students, they are more likely to be able to attend to the students' mental health and wellbeing, particularly if they are not overwhelmed with implementing multiple initiatives simultaneously.

The evidence from our project indicates that teachers who prioritise their focus on developing students' sub-skills, and identify appropriate responses and actions that they as teachers can take, become more confident as teachers. This aligns with helping and guiding students to be more actively involved in self-assessing and directing their own learning in what Hipkins (2015, p. viii) regards as "students' active involvement in a range of assessment practices." Hipkins indicates that it is very important to grow "student assessment capability", because students develop their understanding of the requirements of assessments better and therefore have more capability to monitor their approaches to learning. Teachers can help to guide students on what to focus on, depending on the specific requirements of assessments and students' assessment of their own capabilities.

We have observed teachers who have been supported to develop their teaching through small changes and interventions. Examples of some of the pedagogical shifts are provided in Chapters 2 and 3. Many

of the teachers in our project schools were seriously and continuously embracing pedagogy for meeting the specific needs of their focus learners. They are finding that tracking the learning of four to five learners keeps the more detailed approach to using evidence of learning for priority students—and responding to this evidence—manageable.

To varying extents all of the leaders in the three case study schools employed the idea that TAI could make a difference for priority learners. We observed in School C (see Chapter 3) how the moral imperative was more clearly a driver behind the decisions the principal made. Potentially this in itself helped drive the teachers at this school to engage with TAI purposefully, and consequently there were more shifts in teaching practices and positive effects on student outcomes. School-wide and system-wide lift will occur when the moral imperative to use TAI for improving outcomes for priority learners is embraced. Leaders have a clear role in articulating this and being relentless in making it clear.

The importance of school leadership

If we take the moral imperative above seriously, then the drive for equity within schools requires committed and well-organised leadership. Hargreaves (2015, p. 286) writes that "equity is about uplift as an end". This may require leaders to inspire their teams through their own personal courage and tenacity to motivate those around them. There should be a leadership focus on enabling teams to succeed, rather than a focus on compliance or the performance management of individuals.

The importance of the involvement of school leaders in whole-school initiatives seems obvious. Leaders matter (Robinson, Hohepa, & Lloyd, 2009) because they create and maintain the environment and can use the systems within the school to support implementation and acceptance as 'part of what we do here'. They can provide resources and create structures and procedures that can support teachers to make a difference. However, not all school leaders get involved in the specific implementation of an initiative. Often the details are delegated to a senior leader within the school. We have observed across the 47 schools involved in the Secondary Student Achievement project the influence of the principal when they actively monitor progress of implementation of TAI and keep a close eye on actions and ongoing progress in meeting expectations.

A meta-analysis (best evidence synthesis) of effective leadership practices (Robinson et al., 2009) indicated that leadership practices can have a large, very educationally significant effect on student outcomes. Leaders were found to have a more direct influence when they provided both informal and formal opportunities for teacher learning and development. For example, staff in high-performing schools reported that their leaders worked directly with teachers or departmental heads to plan, co-ordinate and evaluate teachers and teaching. Such leaders tended to provide professional evaluations that teachers found useful, and ensured student progress was monitored and assessment results were used to inform the next practices that could improve teaching.

Robinson et al. also found that when leaders are actively involved in professional learning, they are more likely to implement the necessary changes by making adjustments to class organisation, resourcing, and assessment procedures. They become more attuned to the issues of practice and what needs to be changed. If they actively participate in TAI, they are modelling how they value it as a process.

Developing and supporting the effective functioning of professional learning among staff have been shown to support teachers to learn professionally, especially when they are focused on improving student success as a collective (Carnell & Lodge, 2002; Harris, 2002; Timperley, 2011a, 2011b; Wenger, McDermott, & Snyder, 2002). In order to establish and sustain such communities, leaders may need to challenge or change existing school cultures to support collegial discussion about the relationship between teaching and enabling learning. It may also require leaders to remind teachers more than once about the purpose and potential gains for students—the *why* of being involved. Successful and sustainable professional learning communities are associated with a strong sense of collective.

Leadership for learning is more likely when leaders ensure that teachers prioritise student learning, make shifts and changes in their teaching to enable more effective learning, and as a group take collective responsibility and accountability for students' achievement and wellbeing. In an ERO report (2014) the evaluation team found that in schools where the principals were successfully managing change, they were very knowledgeable and skillful, and exhibited the characteristics of powerful leadership. In other words, they were able to identify what

their community of learners (students and teachers) needed and were able to take action to support progress.

Effective teacher inquiry is contingent on a strong vision for the purpose and outcomes related to professional learning in schools and how this is linked to improving student outcomes. Where TAI was working well, and in the three schools described in Chapter 3, the leaders of the schools had incorporated TAI into the schools' appraisal processes as a tool and lever for continuous professional learning that all teachers should be engaged in. Initially, in all three schools this was considered by some teachers to be inappropriate. There is still some disquiet in these schools that ongoing progress with professional learning should be decoupled from appraisal. This issue is discussed further in Chapter 5. The importance of school leaders in enabling the vision to be articulated, driving the culture of continuous improvement and shaping how teachers focus on inquiry as part of their continuous professional learning should not be underestimated.

While good teachers reflect on their teaching and routinely make changes associated with identifying the needs of their students, not all teachers do this naturally. They often need to be immersed in a culture where it is acceptable to take risks and reflect on what could be improved. Or they may need to be convinced that undertaking TAI is useful. The leaders in our study also needed to be convinced. A facilitator's success story highlights how a principal led the literacy development of his school.

Success story: Literacy facilitator

Early in term 4 of a school year, as professional learning facilitator in adolescent literacy, I was approached by the literacy leader of a large, urban, integrated boys' school seeking support in developing a school literacy development programme. I subsequently worked with the school for just over 2 years. From my point of view what ensured the programme's continuance and acceptance by pretty much the whole teaching staff was the obvious leadership by the principal. Because he knew intimately how the programme was structured, what the professional learning being undertaken involved and what the specific intentions were for student learning, he was able to promote and support the programme in detailed, practical ways every week.

The teaching staff knew he knew, and were therefore ready to accept his leading them to reflect on and develop their teaching practices with regard to student literacy development.

In this case the principal embraced the vision for improving whole-school leadership and indicated specific strategies for staff to help them focus on literacy as a priority.

He did not discard what teachers had done previously, but rather used the power of reflection to focus on what was needed for future practice. Looking back was a key step to moving forward!

Secondary Student Achievement project

The Secondary Student Achievement Professional Learning and Development contract was funded by the Ministry of Education to enable subject-specific facilitators to support middle teachers to re-examine their curriculum and teaching practices in order to improve outcomes for priority learners. Schools and facilitators from the University of Canterbury and University of Otago, in partnership with Ngā Rūnunga through Te Tapuae o Rehua Ltd[2] worked together to develop TAI. The implementation of TAI project Mau ki te ako (grasping or enhancing learning and teaching), included all learning areas of *the New Zealand Curriculum* but not all learning areas were included in all schools. This project differed from previous PLD in that it required teachers to focus on four to five priority learners only. In this case, priority learners included Māori and Pasifika students, students with special education needs, and students from low socioeconomic backgrounds. This particular form of TAI was implemented in 47 schools across New Zealand and was informed by previous research on TAI (Halbert & Kaser, 2013; Kaser & Halbert, 2014; Timperley, 2011a, 2011b).

The research project that was associated with the implementation of TAI is the subject of this book. It was specifically designed to consider examples of success and to provide rich descriptions of cases. We wanted to develop in-depth examples of cases where we considered patterns that emerged from the leadership, changes to teaching,

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2   Te Tapuae o Rehua Ltd is the company set up to support the local iwi (tribe), Ngai Tahu, which has supported high school teacher PLD across all learning areas.

facilitation and student outcomes. This research was bound by and utilised ethical practices such as anonymity and confidentiality. Ethical approval was obtained through the University of Canterbury Human Ethics Committee. All participants in the research project were volunteers and there were no incentives to take part nor were they obliged to from the perspective of the school management.

TAI is depicted as spirals of change by Kaser and Halbert (2014), who present a cyclical professional learning approach and refer to ongoing teacher change and learning as spirals. They link the inquiry and professional learning to the question 'What's going on for our learners?' in order to emphasise a learner-centred approach as the focus for PLD, rather than a pedagogical or teacher performance emphasis.

What is becoming apparent in similar studies on TAI (Halbert & Kaser, 2013; Rozenszajn & Yarden, 2014; Timperley, 2011a) is that this type of PLD is customised for individual teachers, whereby a facilitator guides the design and focus of the teacher's inquiry and provides mentoring and background information or pedagogical ideas that appeal to each teacher's unique orientation. In this way, the facilitated TAI approach recognises that there will be diversity in the backgrounds and experiences of the teachers, as much as there is variation in students' needs. This approach supports the development of each teacher's own professional knowledge and skills to enhance them for improved student outcomes.

In this project, subject-specialist secondary facilitators connected with middle teachers to focus on aspects of curriculum design based on student learning progress information, pedagogical change (including the use of ICT), assessment practices, and the inclusion of subject-specific literacy and culturally responsive approaches to teaching and learning. The teachers in this project realised they had to build on the strengths of their past practice—use the present learning information to design the future learning experiences—but also that this was an ongoing process.

In this PLD project we were particularly interested in the processes that enable teachers to develop their inquiry skills and what leadership strategies and school-wide processes support the schools to enable progress with TAI. Professional learning should contribute to the benefit of individuals, groups and schools to enhance the quality of educational

outcomes (Day, 1999). Renewing and extending teacher knowledge, skills and thinking can occur through individual or collaborative efforts that are designed to implement approaches for enhancing students' learning experiences (Harris, 2002).

> *"The teachers in this project realised they had to build on the strengths of their past practice—use the present learning information to design the future learning experiences—but also that this was an ongoing process."*

For TAI to be effective, it has to be a collaborative effort between the "student, teacher and organization" (Timperley et al., 2007, p. xiii). Therefore considerations about TAI must take account of both the direct and indirect effects of teacher changes on different stakeholders (Muijs et al., 2004). One of the indirect effects targeted in this project was to include the benefits to the department or school (as well as benefits to the teachers and students), particularly how the teachers' inquiry processes and successes contributed to the changing culture of teaching in each school.

Effective professional development occurs when school structures and school culture support the changes that are needed. Feedback loops to help senior management find out what resources teachers need are very important. Therefore the structures and developmental initiatives at a whole-school level need oversight and leadership to make sure they are supporting the development of groups of staff. School leaders play a crucial role in all aspects of developing a culture of continuous professional learning. As Levin (2010, p. 309) wrote:

> Change strategies are comprehensive with an emphasis not only on professional capacity building and strong leadership, but also on targeted resources and effective engagement of parents and the broader community.

While the cases presented in Chapter 3 indicate specific interventions undertaken by teachers in response to the identified needs of the students in their care, the in-depth examples from three case study schools

indicate patterns of experience and contextual nuances that were reflected in the wider project as it progressed in the 47 schools where the project was being implemented. Due to the scope of the project, it was not possible to collect and synthesise the qualitative information from all 47 schools to the same depth as these three case study schools.

Guiding questions

1. How might identifying the needs of four to five learners help you to focus on developing an inquiry project?

2. What kinds of evidence could you use to find out if the changes in your teaching are making a difference to students?

3. Can you give an example of where you have prompted or guided students to think about their own specific learning strengths and needs?

4. What do leaders need to keep in mind when implementing schoolwide TAI?

5. If there were two ideas that you would like to share with other teachers about TAI, what would they be?