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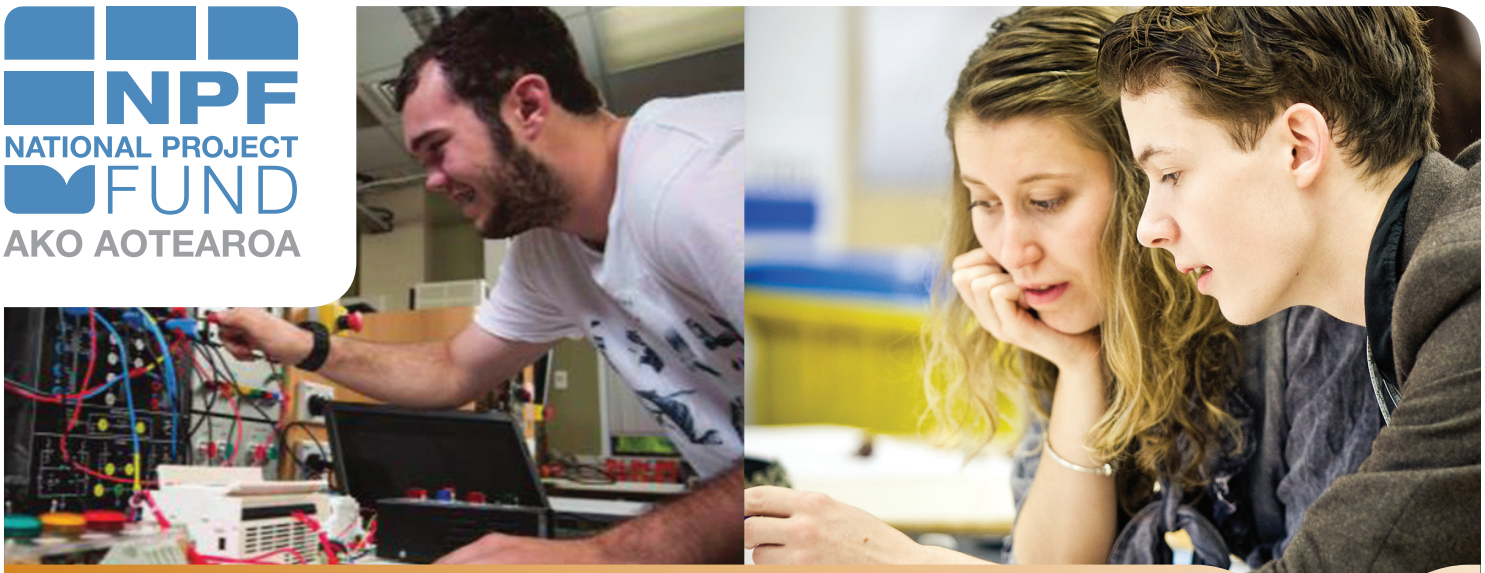

Report

Professional Development Decision-making to Support Under-25 Student Success

Judith Honeyfield, Lesley Petersen, Vaughan Bidois, Liz Fitchett, Helen van Toor, Leonie Nicholls and Mike Crossan

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PROFESSIONAL DEVELOPMENT DECISION-MAKING TO SUPPORT UNDER-25 STUDENT SUCCESS

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Executive Summary

> *"[Teachers] need to have a good understanding of the age group they are teaching. We are teenage guys; we are not exactly the most mature people out there. You can't expect us to act like 40 year olds."* (Student)

Introduction

Improved educational outcomes for youth are a key focus for central government and the future social and economic aspirations of our country. But how do we know which teaching and learning approaches work best for those under 25 years of age? How do we develop effective tertiary teachers, well-equipped to support their learning? Under-25 student retention and completion across the tertiary sector has traditionally been lower than the total student cohort (Ministry of Education (MoE), 2014). The latest data (2014) from the Tertiary Education Commission (TEC) shows that r Under-25 students represent 51% of the institutes of technology and polytechnics' (ITPs) student populations, and 16% at wānanga (compared with 75% at universities). Also, once enrolled, for each organisation, course completion rates for Under-25s are also lower than those of the student body as a whole: 79% for ITPs and 75% for wānanga, compared with 80% for all students in both these organisations (course completion for Under-25s at universities is a much healthier 86%).

This apparent under-performance of Under-25 students at ITPs and wānanga is due to a cluster of contributing factors. Open-entry and the diversification of the student body have had significant impacts, where non-traditional students (including non-English speaking background, second-chance and first-in-family learners) are entering sub-degree higher education in increasing numbers. In consequence, many students who come into the ITP and wānanga sector are sub optimally prepared for tertiary study, particularly when compared to many of the other students entering the university sector (Alton-Lee, 2003).

There has been considerable attention given to the learning needs of the Under-25s. However the team's initial literature review, which examined literature investigating teacher professional development that supports and contributes to successful learner outcomes for youth, Māori and Pacific students, found no models to guide professional development decision-making for teachers of Under-25 students. (The full literature review can be downloaded as a separate document; this report contains excerpts only.)

A team of tertiary teachers and staff developers across four ITPs and one wānanga engaged in a two-year project, funded by Ako Aotearoa, to investigate professional development decision-making in order to improve Under-25 students' achievement. The purpose of this project was to create an integrated professional development decision-making model which enhances practice to benefit Under-25 students.

Methodology

This project made use of a Kaupapa Māori methodology and conceptual framework, which provided a critical and reflective lens through which to evaluate the project's design, analysis and outcomes. The framework took account of the structural, cultural and political factors (Smith, 2012) that impact professional development decision-making. Thus this project makes a significant contribution to the existing knowledge base for professional development of tertiary teachers. The research team made use of the following guiding definitions for these terms. A structural perspective considers the dominant overarching structures and ideologies that exist within a particular institution that shape

its culture and practices. A cultural perspective considers how our experiences, values and beliefs in the world are determined by culture rather than overarching institutional structures**.** A political perspective examines the way in which power, and therefore decision-making, operates in everyday relations between people and institutions.

When considering the structural, cultural and political considerations of each of the five institutions, it became apparent that each organisation was a unique context, with its own practices and providing unique experiences. Recognising the contextual influences helped the research team to identify the ambitious nature and complexity of the project.

The method and project design agreed upon by the research team was to identify and engage with case studies of programmes with high proportions of Under-25 students. Two programmes from each institution were selected and included the following:

1. Bachelor of Computing Studies, level 7
2. Certificate in Engineering and Trades, level 3
3. Certificate in Computing, level 3
4. Certificate in Engineering, level 3
5. National Certificate in Tourism, Māori, levels 3 and 4
6. Bachelor of Education Programme, level 7
7. Certificate in Vocational Skills (Core), level 2
8. Diploma and Bachelor of Teaching, Early Childhood Education, level 7
9. Certificate in Building, level 4
10. Certificate in Electrical Engineering, level 2

At the outset of the project, practical constraints of conducting this inquiry over five providers meant that in some cases, there were additional selection criteria which the researchers had to consider and incorporate. These were that:

- some programmes were selected because the outcomes could be improved
- other programmes were selected as they were already showing excellent results for Under-25s, and the research team wanted to understand what the key enablers were
- two programmes were undergoing redevelopment as part of an institutional move to a project-based pedagogy, and professional development for the teachers was seen as crucial to the success of this shift in delivery.

Due to this range of selection criteria and contextual variation, the research team identified early in the project that improvements in learner achievement would be variable across the 10 case studies. In recognising this variability, the team agreed early in the proceedings that quantitative data alone would be insufficient to reflect the impact of the planned professional development interventions. As a consequence, it was decided to investigate the role of the student voice in providing a clearer picture of their preferences around teaching and learning delivery and environment.

Thus initial data was collected from three participant groups beginning with ākonga/students, followed by kaiako/teachers and stakeholders (Programme Coordinators and Group Leaders, Heads of School and Departments, Academic Directors, Learning Advisors and Staff Developers). Next, a year-long professional development/teaching intervention was planned for each case-study, responding to the specific context, and following extensive consultation. In some programmes, this meant developing completely new strategies; in others, deliberate, evaluative inquiries were made

into existing practices. During and following implementation, the participant groups were re-interviewed. This qualitative data was collated and themed to iteratively inform the project, data collection and professional development decision-making and interventions. Each of the ten case studies also collected and analysed quantitative data about success and retention.

As part of the team process, a logic model was developed as a tool for organising the planning, implementation and analysis of the project. This model was continually refined as a living document throughout the project. An essential component of the model was the identification of desirable early-term change, intermediate change and long-term goal achievement as a result of the project actions and activities. The completed model, which captures the project team's process, is included (Table 3, p. 14) as a 'background' record of how the project activities were aligned to the original objectives, and led logically to the outcomes and final outputs.

Findings

Throughout the project, and during the data analysis phase in particular, a constant focus was identifying the differences in learning needs between Under-25s, in our case studies, and the wider student population[1]. Based on feedback from the students, teachers and stakeholders, and informed by the literature review, the following features were identified across the participant groups:

- It is important for teachers and stakeholders to be aware that students often do know what they need for their learning and to consult them on this. Avoid assuming that it is up to teachers alone to decide how to best facilitate and support students.
- Developing life skills alongside academic and work-ready skills is essential for the majority of Under-25 students.
- In three quarters of the case studies, the Under-25 students reported a preference for practical learning opportunities.
- Enabling students to make choices regarding how they approach their own learning is important.
- Providing a different structure and teaching and learning approach to the compulsory school environment is essential as many reported previous negative learning experiences.
- Technologies and visual learning media as learning tools are favoured ways to learn for Under-25 students.
- Establishing effective relationships between students, and students and teachers, improves students' learning experiences and outcomes.
- Pastoral care support mechanisms need to be in place to provide wraparound support and learning opportunities for students, who may also have challenging personal lives.

Certainly many of these characteristics apply for all students, not just the Under-25 cohort. However, this project confirmed that it is the extent to which *all* these factors are present in the learning environment, which has the most impact on student success and achievement for Under-25s. As Savin-Baden, McFarland, & Savin-Baden (2008) note, adult learners can draw on a wealth of

[1] The data used to identify outcomes for 'all students', reports all students within the cohorts of the identified case study programme – that is, all students includes all students under 25 and over 25 years of age. The data used to identify outcomes for learners aged Under-25 are defined by the student's under 25 years of age as at 1 July of the year of interest.

past experiences, prior knowledge and resiliency strategies to mitigate shortcomings in their learning environments; the younger the tertiary student, the less chance they have had, generally, to develop such a repertoire.

Quantitative course completion data was collected and analysed, which allowed achievement differential comparisons with the two previous years prior to this project (2011–2012), and the two years of project (2013–2014), a total of four years, for Under-25s and for all students enrolled in the programme (see Appendix). The quantitative outcome data was variable.

Table 1: Summary of impact - Quantitative findings

Case study #	Post intervention impact		Comments relating to impact on all students in case study programmes
	All students	Under-25s	
1	Positive	Positive	Small Under-25 student gap closed
2	Negative	Negative	For all students especially Under-25
3	Positive	Positive	Over 90% course completions
4	No impact	Positive	Over 90% course completions
5	No impact	Negative	All students high course completions – low numbers Under-25
6	No impact	No impact	Low numbers Under-25 students
7	Positive	Positive	For all students especially Under-25
8	No impact	Positive	All students – maintained high course completions
9	Negative	Negative	No gap between Under-25 and all students
10	Positive	Negative	All students – maintained high course completion

For some of the programmes, demonstratively positive upward trends for all students, including those Under-25, were visible. For other programmes, however, the gains in course completion achieved during the professional development intervention period were minimal, or led to reductions in course completions. As outlined in the discussion on the process of selection of case study programmes in each organisation, this variation was not wholly unexpected – some of the programmes were already achieving to high levels of success. The components of this success are captured in our qualitative findings in describing what effective teachers for Under-25 students do and in Resource 8, a self-assessment tool based on these descriptions.

It is important to note the achievement differential between Under-25 students and all students in the programmes in the professional development decision-making intervention year, 2014. Gains noted in the programmes that could be attributed to professional development decision-making and interventions were observable in four case studies. These observable gains also influenced all student completions positively. However, four case study programmes showed a reduction in course completion outcomes and demonstrated increased vulnerability in the Under-25 students compared with all students in the programme. Two case studies showed no impact. One case study appeared to be the only programme that showed a sustained gain in Under-25 achievement greater than all students in the intervention year, 2014. This case study was chosen because of its historical completion success and thus researchers were able to use the experiences of these staff and students as important contributions to the findings in this project. This case study completions data over the two years of the project give a positive indication that the interventions, while focused on Under-25 students in particular also positively impacted all students. Reduced course completions

indicated a learning environment was suboptimal. Where these negative shifts occurred for Under-25 students, they also occurred for the wider student body, although to a lesser extent.

The literature review confirmed that establishing causal links between teacher professional development and improved student outcomes is complex: a teacher's input into student success is just one of many variables in a multi-stranded process (Zepke et al., 2005). Other variables that may or may not have contributed to these outcomes included organisational, political, cultural, resourcing and staffing issues; relationships between key staff; and management and leadership influences. Secondly, undertaking professional development does not automatically lead to improved practice, and where it does, the impact may take time to fully embed and evidence (Gibbs & Coffey, 2004; Timperley, 2011; Zepke et al., 2005). Whilst the team acknowledged the importance of the quantitative data and a focus on successful outcomes for Under-25 students, we note the limitations over the year-long interventions and suggest more longitudinal studies be carried out.

Despite the inconclusive results of the quantitative aspects of this project, the qualitative outcomes were rich. The themes drawn from participant responses, in relation to success and achievement for Under-25 learners, identified students valued:

- quality teaching and learning environments with embedded student support
- relational and relevant learning and teaching
- employability and higher learning transitions.

To this list, teachers added the needs for:

- redefining, reframing and repositioning professional development for an integrated, whole-organisation approach
- reflective and reflexive teaching and learning practice
- leadership-driven quality teaching and learning and staff support
- professional communities of practice.

For managers and staff development stakeholders, the two most consistently recurring themes were:

- relational and relevant learning and teaching (theme 2)
- leadership-driven quality teaching and learning and staff support (theme 6).

These seven themes need to be understood in relation to the structural, cultural and political contexts of each organisation, recognising the impact of context on professional development decision-making.

To these findings, the research team added the following two learnings, based on our own reflections and observations. Firstly, it is important to listen to Under-25s and those who work with them. Canvassing feedback from all participant groups has meant students, teachers and stakeholders have been involved in a process of discovery, so that for many, engaging in the research process became the main enabler of professional development decision making. Secondly, considering these findings from the teachers' and stakeholders' (managers and advisers) perspectives, it seems important to look at a professional development decision-making model to ensure there are no assumptions made about 'one right way' to provide professional development. In light of these two learnings, it would appear professional development needs to move away from an ad hoc, reactionary approach to a more organised, proactive and flexible decision-making model,

where teachers can be supported to choose professional development which is likely to improve their own teaching and result in more successful outcomes for their students.

The importance of the student voice in the analysis of the learning needs and the engagement of staff and stakeholders in responding and deciding what professional development would support effective teaching practice emerged. This cycle needs to translate into action with strategies and approaches to implement teaching and learning practices in the classroom.

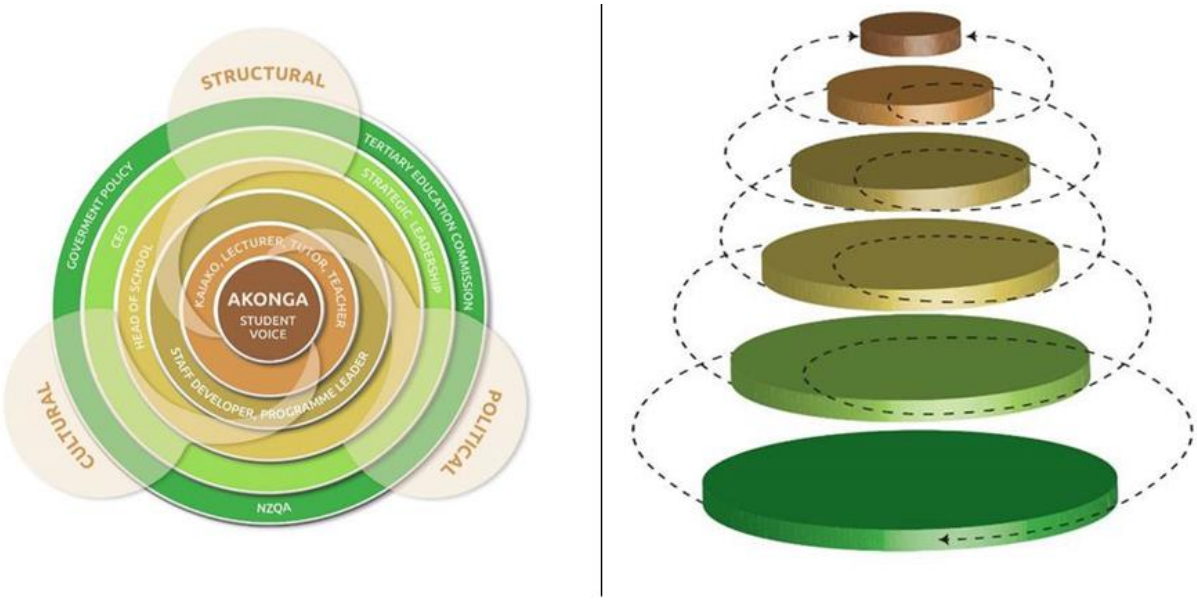
To assist such action, professional development resources developed from the findings of this project led to a shift in the team's understanding of the structural, cultural and political factors that contribute to professional development decision-making and effecting change. A further learning was the importance and value of professional communities of practice to support enacting professional development conducive to Under-25 student success. Sustainable communities of practice, where knowledge and resources are shared to contribute to developing reflexive and critical practice, formed a significant professional development activity across the majority of the case studies. In addition, supportive mechanisms like collegial discourse, teaching focused team meetings and peer observations proved to be transformative activities.

Project conclusions and outcomes

1. Development of a new Integrated Professional Development Decision-making Model

This professional development model is intended for use by whole organisations (that is, by teachers, staff developers, and management). The model presents a multi-tiered approach to developing effective teachers for Under-25s, in which the ākonga/student voice is at the centre. It is a model for change, and is intended to be both sustainable and transforming, in keeping with the critical directives of Kaupapa Māori theory (Smith, 2012).

Figure 1: New integrated professional development decision-making model



Essentially, this model is conceptual and contextual, and enactment will depend on the cultural, structural and political considerations of each particular provider. However, the model's core elements will remain consistent: a multi-tiered, pan-institutional and holistic approach which

involves every member, at every level, in a collective vision of professional development decision-making.

The spiral configuration is intended to illustrate the multiple tiers and levels in which crucial decision-making occurs (learning environment, teacher, teaching team, advisors, management and government). The concentric circles reflect the various tiers where change processes and agents influence professional development for effective teaching of Under-25 students. In the three dimensional model above, as the student voice radiates outwardly, each level responds accordingly to positively influence professional development decision-making and access. In this model, formative and summative evaluations of learning and teaching lead to ongoing action planning and reporting that is highly visible and interconnected.

Approaches to decision-making about professional development can therefore be better understood as a multi-layered and integrated approach, where student voice is central to the decision-making process. This research project concludes that educational organisations, by focusing on and listening to the student voice and supporting teachers to access and implement professional development, will see improved outcomes for Under-25 students. It is in the second tier (Kaiako/lecturer/teacher) that it is most likely the resources developed through this project will be utilised. The critical questions framed for stakeholders, linked to this project's six key themes, will be most relevant to the third, fourth and fifth tiers of influence. The cultural, structural and political considerations central to Kaupapa Māori theory, as outlined by Smith (2012) and identified in the literature review, apply across all tiers, as is captured in the model.

2. Extended literature synthesis

The extended literature synthesis which underpinned the project has been produced as a separate reference document and can be downloaded here www.akoaotearoa.ac.nz/projects/professional-development-improve-outcomes-under-25-learners.

3. Project resources for teachers, staff developers and managers

Implementing the professional development decision-making model and learnings from the case study programmes across the five organisations led to a series of interventions and eight resources being developed and refined within this project. The resources can be downloaded here www.akoaotearoa.ac.nz/projects/professional-development-improve-outcomes-under-25-learners.

The eight resources developed are listed in the table below.

Table 2: Professional development resources for teachers of Under-25 students

Resource	Explanation and utilization
1. Orientation and whakawhanaungatanga: activities for Under-25 students.	Starting the course with positive relationships between learners, teachers and other support staff is important. This resource provides a number of activities and approaches to: 1. Establish a sense of group and connectedness 2. Know your learners 3. Enabling student team work 4. Link education and practice.
2. Establishing a community of practice (CoP) concept plan for teachers working with Under-25 Māori students	An overview and concept plan for establishing a CoP for teachers of Under-25 Māori students, to share strategies, ideas and challenges with each other and support improvements in teaching practice.

3. A process for establishing and maintaining effective groups and teams.	An overview and step-by-step process for establishing and maintaining effective groups and teams to enable educators to intentionally prepare, establish and enhance student learning.
4. Peer observation of teaching	Provides a process and templates for peer teaching observation. Enables reflection, review and action planning.
5. Timing teacher talk: A formative teaching observation tool	An eight-step process to gain quantitative and qualitative data from formative classroom observations to assist reflection and changes in practice.
6. Three-way teaching feedback	This resource helps to identify possible areas for teachers to change their practice to improve student learning. It takes into account data gathered from the teacher, their students, and a trusted observer. Includes a video example.
7. Teaching young students workshop series	The session plan and associated resources provide a facilitator (e.g. staff developer) with a process for planning, organising and facilitating a series of group workshops for teachers of young students.
8. Self-reflective analysis tools	Developed from the synthesized ākonga/student, teacher and stakeholder descriptions of effective teaching attributes and practices, these guide reflection, professional development decision-making, and action planning.

Source: www.akoaotearoa.ac.nz/projects/professional-development-improve-outcomes-under-25-learners

4. Critical questions: Enacting the Integrated Professional Decision-making Model

A series of critical questions for managers and staff developers and advisors were developed in relation to the findings and key themes of the project to assist enactment of the Integrated Professional Development Model. These critical questions are:

Relational and relevant learning and teaching

- What do I need to know and do to support teachers catering for students with diverse needs?
- How do I support and facilitate staff development that ensures the diverse needs of students are met in my organisation?
- How do I promote and ensure that teachers have access to a range of opportunities to develop pedagogical, learning and teaching skills?

Leadership-driven quality teaching and learning and staff support

- What team-based processes are required to ensure whanaungatanga and a positive collective learning environment for Under-25 students?
- How is data relating to student engagement and achievement analysed and shared to inform teaching in my teams/organisations?
- Is reflective teaching practice fostered and underpinned by a range of learning theory and evidence-based practice for Under-25 students?
- What opportunities are available for staff to develop innovative creative teaching strategies which also reflect an ethic of holistic care for students?

Professional communities of practice

- What structures and resources can be allocated to ensure teachers have access to a range of pedagogical learning and teaching resources that can be adapted to suit their own contexts?

- How do we ensure teachers have access to a range of successful teaching strategies and activities for their Under-25 students ideally, cross-organisationally?
- What values, principles and theories support teachers in developing effective practices in culturally responsive ways?

Concluding thoughts

Assisting teachers of Under-25 students to meet their students' needs and learning preferences requires a multi-tiered institutional approach to support and resource professional development decision-making. The overarching conclusion of this project is that engagement in well-planned, organisationally-supported professional development that links to the learning needs and preferences of Under-25 students creates better outcomes for these learners, and has a flow on effect to the wider student body.

The decision-making model developed as an outcome of this project illustrates a whole-organisation, multi-tiered and fully integrated approach, in which the student voice is central. The project team believes that the Integrated Professional Development Decision-Making Model, and the teaching and learning resources developed through the implementation of the model, will make a significant contribution to research in professional development decision-making across the tertiary sector.

INTRODUCTION

> *"Under-25s represent over 70% of our students and are a large part of our pastoral support load for the teachers. Any assistance with building the capacity of our teaching staff to support these learners would be good."* (Head of School, ITP)

> "*Many tertiary lecturers are experts in their chosen field of practice but not in tertiary teaching – consequently they often lack the strategies and skills to effectively engage young learners.*" (Head of School, ITP)

Why focus on Under-25 students?

Under-25 student retention and completions across the ITP and wānanga sectors have traditionally been lower than those of the total student cohort (MoE, 2014). In 2014, students under 25 years of age represented 51% of the total student body in the ITP sector, and completed 79% of their courses. In contrast, in wānanga Under-25 students made up only 16% of the student body, with course completions of 75%. The eight New Zealand universities had an average of 75% of students in the Under-25 bracket, with 86% course completions for these students (TEC, 2014).

Significant new funding growth and policy initiatives in the tertiary ITP sector over the past three years, such as those in the Youth Guarantee and Trades Academy areas, have sought to address access and achievement disparity, recognising poor achievement at school for some students. Yet such initiatives targeted at improving outcomes for youth from the secondary sector will necessarily have limited reach once these students do make the leap to tertiary organisations should the legacy of lower-than-average achievement continue.

In addition, poor or non-existent transitions between secondary and tertiary education has also contributed. The importance of effective transitions from the compulsory sector is also picked up in a 2005 longitudinal study, *What factors make a difference to getting a degree in New Zealand?* (MoE, 2005, p. 16), which found that in actual terms, the rate of completion is highest for students starting their degrees aged 18 (such as those coming directly from school). The rate of completion is lower for those under 18, and also for those starting later, declining steadily after 19 until age 25. While this study only relates to degree-level study, it is likely the same patterns exist in levels 2 to 4 programmes as well.

Strategic priorities for Under-25 students

Successive tertiary education strategies have set the strategic direction for tertiary education in New Zealand. The current 2014-19 Tertiary Education Strategy (TES) (MoE, 2014) highlights New Zealand's high tertiary education participation rates in all age ranges except 15 to 19 year olds. New Zealand's participation rate amongst 15 to 19 year olds is at 81% for the whole tertiary sector; the Organisation for Economic Cooperation and Development (OECD) average is 86% (OECD, 2013). Within tertiary study, "New Zealand has one of the lowest percentages of entrants who complete their programme" (Scott & Gini, 2010, p. 8).

The strategic priority areas outlined in the current TES are:

1. delivering skills for industry
2. getting at-risk young people into careers

3. boosting achievement of Māori and Pacific
4. improving adult numeracy and literacy
5. strengthening research-based institutions
6. growing international linkages.

Priorities 1 to 4 align directly with the goals of this project: understanding how to engage *all* learners under 25 in meaningful and relevant study pathways; how to assist teachers in developing effective delivery strategies; and how to direct organisational resources to support teachers and managers through informed decision-making about professional development provision.

The strategy signals a focus on strong economic, environmental and social outcomes. For tertiary education providers, this not only means expectations are high "in terms of outputs, efficiency and student achievement" but also "a focus on the outcomes of tertiary education is needed" (MoE, 2014, p. 7).

An important debate for the team at the outset of this project was whether Under-25 students could or should be categorised as a separate group. Sternberg (2012) identifies Generation Y as students who began tertiary study at the turn of the century. Referred to as the Net Generation, Dot-Coms, Echo-Boomers, iGeneration and Millennials, they are "the first true digital natives of the Information Age" (p. 572). This generation are the pervasive users of social media networks where their connections to knowledge and people are often fluid, informal and technology assisted. Le Rossignol (2010) states that "the millennial learner sees experiences as more important than the acquisition of information" (p. 455), valuing knowledge that is often communally created. Yet Sternberg (2012) cites other studies which argue against the value of grouping a youth cohort of students, suggesting that except for the trappings of youth culture, students today are little different from their predecessors in terms of curiosity, knowledge, fluency, skills or worldly awareness. In this interpretation, some of the characteristics of Generation Y will apply to some Under-25 learners, but not all. It should also be stated that the majority of students who come into the ITP and wānanga sector are often less than optimally prepared for tertiary study, compared to many of the students entering the university sector (Alton-Lee, 2003).

Another field traversed in the literature is the unique cultural heritage of Aotearoa New Zealand and the impact this has on effective teaching and learning for Māori students. New Zealand has a strong tradition of scholarship in the needs of Māori learners in English-medium settings, and how teaching practice can enhance the engagement and achievement of Māori (Airini Brown et al., 2010; Alton-Lee, 2003; Bevan-Brown, 2000; Bishop, 2003; Bishop & Berryman, 2009; Heke, 2008). Many of the ideas have influenced the case study interventions which will be described in this report, as well as contributing to the project's decision to adopt a Kaupapa Māori theory framework to guide the inquiry.

Given the Under-25 student focus, therefore, in carrying out this project the research team has needed to pay attention to both the group and the individual nature of learners, recognising similarities as well as diversity. A key mechanism has been the inclusion of student voice and feedback, described in more detail later in this report.

Project aim and objectives

The purpose of this study is to increase successful outcomes for Under-25 students through improved professional development decision-making. Related objectives include:

- to provide evidence of effective teaching practice that supports the learning needs of the Under-25 students
- to identify what professional development teachers of Under-25 students need to effectively support student needs
- to develop an evidence-based model that will guide professional development decision-making for teachers of Under-25 students.

Expectation of change

To undertake this study we developed the following logic model (Table 3) to map our expectation of change. Wyatt Knowlton and Phillips (2009) define a logic model as a "visual method of presenting an idea" (p. 5). The authors believe that a logic model offers a way to describe and share an understanding of the elements within relationships necessary to operate a change effort. Our five-organisation project team used this logic model to guide our learning and understanding as the project was enacted. The model assisted review and identification of iterative evidence, to map our dialogue and feedback to and from our participants and each other as researchers and staff developer practitioners. In this way we were able to review the strength and connection between activities and outcomes. By using a logic model based on how we thought our change project would unfold, we could then test the plausibility of our responses and assumptions with our iterative data collection. The logic model also assisted us to assess the professional development decision-making model and actions as these emerged in relation to each other. A 'theory of change' approach underpinned the model and created a set of connected outcomes or 'pathway of change' for the project (Wyatt Knowlton & Philips, 2009). Anticipated early-term and intermediate changes as a result of the project activities were identified with the expectation that these progressive changes would lead to achievement of the long-term project goals.

Table 3: Logic model - Mapping the project

Inputs	Implementation: Activities	Outputs	Outcomes
Participants: • Under-25 students in 10 case study programmes across five participating institutions • Teachers of Under-25 students in the 10 case study programmes • Managers of case study programmes • Programme Coordinators (PCs) of case study programmes • Academic developers *Personnel:* • Project leaders • Project team members • Institutional champions • Research champions • Admin assistant *Materials/Equipment:* • Interview schedules • Consent forms • Learning technologies *Organisational documents:* • Policies • Strategic plans • Value statements • EPI data	Project team meetings Literature review Baseline data collection: • EPI data • Organisational document analysis • Demographics Interviews: • One-on-one and group teacher interviews • Student focus group meetings • Manager/PC • Academic developers Teaching and learning intervention trials: • Peer observations • Community of practice meetings • Workshops • Learning environment analysis • Classroom observations Data analysis Develop decision-making model Dissemination of findings: • Milestone reporting • Final report • Presentations to participating institutions • Ako Aotearoa workshop series	Development of a professional development decision-making model Development of a suite of evidence-based teaching and learning resources to support Under-25 student cohort Workshop facilitation via Ako Aotearoa's professional development programme Conference presentations/papers Published report of project findings and recommendations for future practice Organisational policy documents	*Early-term changes:* • Early acknowledgement of important factors for success • Institutions acknowledge the need for professional development interventions for teachers of Under-25 students • Case study teachers and managers identify professional development needs • Case study teachers identify professional development interventions which they perceive as supporting their practice with Under-25 students • Each institution has a champion in place to advocate for the project's purpose and institutional engagement *Intermediate changes:* • The teachers in the case study programmes reflect on how they support the learning of their Under-25 students • Case study teachers are trialling a range of professional development interventions and evaluating their impact and outcomes for Under-25 student learning • EPI data shows an improvement in retention and completion rates of Under-25 students in the case study programmes *Long-term goals:* • Institutions use the professional development decision-making model to plan and implement professional development for tutors of Under-25 students • The decision-making model becomes an integral mechanism for institutions to implement professional development for all teaching staff • Increased capabilities and confidence of teachers of Under-25 students • Teachers have a range of professional development resources to call on to support their teaching of Under-25 students • Observable changes in teaching practice with Under-25 students occur • Retention and completion rates of Under-25 students improve

Why is there a need for a professional development decision-making model?

Tertiary institutions have a responsibility to provide professional development to help teachers work effectively with Under-25 students and also the necessary facilities and resources to support high-quality learning and teaching (Coolbear, 2014; Zepke et al., 2005). A starting point for this project was a recent literature review undertaken at the Eastern Institute of Technology (EIT publication, 2013) investigating teacher professional development that supports and contributes to successful learner outcomes for youth, Māori and Pacific students. Our subsequent further exploration of the literature found no evidence-based model guiding professional development decision-making for teachers of Under-25 students. In response, our project set out to investigate and develop such a model. Our working definition of professional development in tertiary teaching contexts was that professional development is a means of discovering the learning requirements of students and developing processes which support teachers in meeting these requirements. The need for teacher professional development is borne out in the literature, which emphasises the significance of teacher attributes (skills, knowledge and attitudes) for positively influencing and impacting the learning experiences and outcomes of students (Alton-Lee, 2003; Darling-Hammond, 2006; Bodkin-Allen, S., Hoffman, J., & Whittle, J. 2012; Zepke et al., 2005).

> Haigh (2006) describes the development of teachers from novices to experts. They progress from early-career teachers to "excellent teachers", "scholarly teachers", and ultimately "scholars of teaching" (p. 110). Such progression requires sponsorship, say Prebble et al. (2004) and assisting teachers to progress within these realms is the responsibility of higher education institutions. Professional teachers need professional education, addressed through a raft of formal and informal professional development schemes. This is because, as Timperley (2008) states, "teachers who are engaged in cycles of effective professional learning take greater responsibility for the learning of all students; they do not dismiss learning difficulties as an inevitable consequence of the home or community environment" (p. 8).

A spectrum of tools and approaches are discussed in the literature to support the success and achievement of students. Mentoring is an influential mechanism for supporting a teacher's academic practice (Gorinski, Fraser & Ayo, 2010; Petersen, 2011). So too are peer teaching, peer review, peer observations and more formal observations (Bishop & Berryman, 2009; Russo, 2005). Another informal support mechanism for teacher development is the community of practice, which allows participation and interaction with like-minded others, providing practitioner-oriented opportunities to learn how to do things better through shared enterprise (Learning Theories Knowledge Base, 2009; Wenger, 2006).

Savin-Baden et al. (2008) reported findings from a comprehensive literature scan over a 15-year period from the 1990s to identify models of effective professional development interventions in tertiary education and the impact of these interventions on teachers' thinking and practice. Their findings identified four key interrelated approaches they called 'Notions of Improvement'. The team utilised these findings to aid discussions about the contextual complexities provided by the project case studies and the types and effectiveness of selected professional development interventions.

Savin-Baden et al.'s (2008) 'Notions' are:

- Notion 1. Institutionally driven improvement – where professional development interventions is imposed by the institutions it is likely, though not always, to be less effective or valued by educators.
- Notion 2. Government strategic driven improvement is also less likely to be a n effective professional development intervention approach due to reduced organisational input and planning to embed the change.
- Notion 3. Integrated bottom-up and top-down improvement approaches were identified as likely to be highly effective, although this was still dependent on ongoing leadership and support.
- Notion 4. Bottom-up improvement was usually, though not infallibly, the best approach for professional development improvements (p. 223).

The current project was originally situated within the directives of the second notion, government strategy improvement, through the focus on the TES priorities. The team recognised, however, an opportunity for developing teaching interventions drawing on the strengths of all four approaches. Project interventions required various levels of decision-making, informed by student voice, teacher and stakeholder feedback, as well as the structural, cultural and political contexts of each case study programme. In this way, the project was both top-down and bottom-up, as well as connecting with government and institutional imperatives.

Probing the complex relationship between teacher professional development and improved student outcomes, Gibbs and Coffey (2004) analysed the teaching development programmes of 20 universities in eight countries, and found that "training aids educators in adopting a student-centred approach to teaching; and that students judge teachers who have undergone training as being better teachers" (p. 98). Brew and Ginns' (2008) research also pointed to a positive relationship between engaging in the scholarship of teaching and learning, and changes in students' course experiences. Both these extensive studies, further supported by Frick, Chadha, Watson and Zlatkovska (2010), emphasise multiple measurements of effect, including student evaluation of teaching and positive and successful course experiences and outcomes, which are able to be cross-referenced to professional development interventions.

How did we respond and what did we do?

Five New Zealand tertiary organisations collaborated in this project (four ITPs and one wānanga): Eastern Institute of Technology, Bay of Plenty Polytechnic, Wintec, Waiariki Institute of Technology and Te Whare Wānanga o Awanuiārangi. Two programmes from each participating organisation with high numbers of Under-25 students were selected as case studies in this two-year project. Choice of programme was also influenced by:

- the possibility that outcomes could be improved
- a desire to understand the key enablers for programmes already showing excellent results for Under-25s
- programme redevelopment as part of an institutional move to a project-based pedagogy for which professional development for the teachers was seen as crucial.

In selecting case studies, the interest from the teaching staff and their managers in engaging with the project over two years was seen as key. The case studies included students, staff and stakeholders from certificate, diploma and degree programmes. Discipline areas covered were

electrical and fabrication engineering, computing, education, early childhood education, vocational skills, carpentry and tourism. The programmes included in the case studies ranged from level 2 to level 7.

Structure of this report

The literature review presented above directly informed both the project methodology and the project design. The research methodology and conceptual framework for this work drew on the structural, cultural and political perspectives, and the critical underpinnings of Kaupapa Māori theory, as described in the following section of the report.

Next, the project design is described, including the developmental and implementation phases of the project, case studies, data collection, analysis and outcomes. Following this, the Findings section is framed by the three voices that informed the project; those of students, teachers and stakeholders. We pose a number of questions for stakeholders to demonstrate the importance of professional development decision-making as a critical and reflexive response to the data presented in this report.

The final section of the report summarises the learnings and outcomes from the project, concluding with a new Integrated Professional Development Decision-making Model to assist all parties in an organisation to have a say in what types of training and development opportunities will be most useful for each context. The Appendix contains a description of the 10 case studies, interventions, outcomes and the associated student comparative course completion data over four years before and during the intervention period.

METHODOLOGY

Research methodology and conceptual framework

Kaupapa Māori research methodology, ethics and principles guided the project, knowledge collection method, analysis and interpretation. Te Whare Wānanga o Awanuiārangi provided the cultural and theoretical knowledge base and insight in the development and utilisation of a Kaupapa Māori derived methodology and conceptual framework at a first hui with the research team. Distinguished Professor Graham Smith, along with other Wānanga staff, spent time with the research team and gifted key components to our developing conceptual framework, for the team to develop further. A second hui was conducted nine months into the project to ensure the objectives, purpose and design aligned with, as well as informed, the Kaupapa Māori conceptual framework.

The utilisation of Kaupapa Māori in a collaborative project such as this provided a unique opportunity for Kaupapa Māori theory and methodology to be employed in research that was not focused on primarily Māori participants, nor by strictly Māori researchers. Smith (2012) states that "Kaupapa Māori theory provides a space for thinking and researching differently, to centre Māori interests and desires, and to speak back to the dominant existing theories in education" (p. 11). For Smith, Kaupapa Māori theory is about change, action and empowerment:

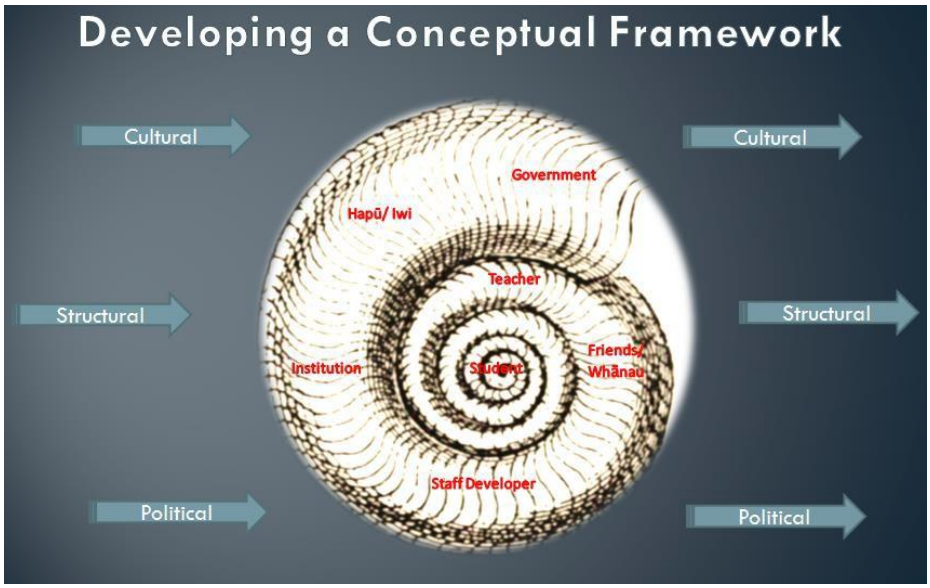
> The key underpinnings of Kaupapa Māori were transported in the first place out of critical theory. Critical theory is a set of ideas that foreground both action and theory: the (political) action of social transformation, and the theory, or idea, of structural analysis that informs the action. (p. 11)

Kaupapa Māori theory also provided the critical concepts and values for the research team. This theory enabled the team to engage in discussion about their own cultural 'positioning' and

'criticality' within the project, and what would actually transform or change as a result of this research.

An initial framework provided some critical concepts, tools and ideas for the research team to utilise in discussing the research and how to conduct it. The conceptual model was represented by the Pūtātara (Conch Shell) depicted in Figure 2. At the centre the student voice spiraled outwards, and informed the three levels of the teacher/kaiako, staff developer/Heads of School, and executive management of the critical decisions that influence professional development. The graduated lines of the Pūtātara reflect the multiple questions that inform effective teaching for Under-25 students. A significant contribution to the framework were the cultural, structural and political influences (Smith, 2012) which provided the research team with a critical and reflexive lens through which to evaluate and analyse the research process and design, analysis and outcomes.

Figure 2: Conceptual framework



Early in the data collection phase, the conceptual framework began to evolve in response to the feedback received from the participants. The project team developed the following précis of these concepts to ensure a shared vision throughout the inquiry:

1. A structural perspective considers the dominant overarching structures and ideologies that exist within a particular institution at a particular period of time and shape culture and experience. Examples of structures include state legislations and policy, institutional hierarchies, curriculum and internal policies, assessment, monitoring and compliance, and the classification of knowledge.
2. A cultural perspective considers that our experiences in the world are determined by culture and not overarching structures and that individuals and groups actively construct both knowledge and reality**.** A culturalist would acknowledge alternative knowledge, practices and beliefs and their ability to shift the dominant cultural worldview.
3. A political perspective considers the tensions and negotiations experienced within cultural, social and structural contexts. It examines the way in which power operates in everyday relations between people and institutions.

Team meetings

The research team met at regular intervals (every four to six weeks) face-to-face and used email and phone calls at other times to communicate. Critical conversations of our research team meetings challenged, at times, our own cultural positioning both collectively and as individuals. Kaupapa Māori theory, however, provided the concepts and language for the research team to engage in critical and reflexive discussions throughout the phases of the project. The professional learning we have gained as a research group and individually as a result of this project has had a significant impact on our development as researchers.

A team communication website was set up to share information and documentation; this was later switched to using DropBox as a repository, for reasons of stability and speed. All of the interview data is held by the researchers at their institution as per the ethics approvals granted by each organisation, and transcripts and other project documents were shared between the team members only.

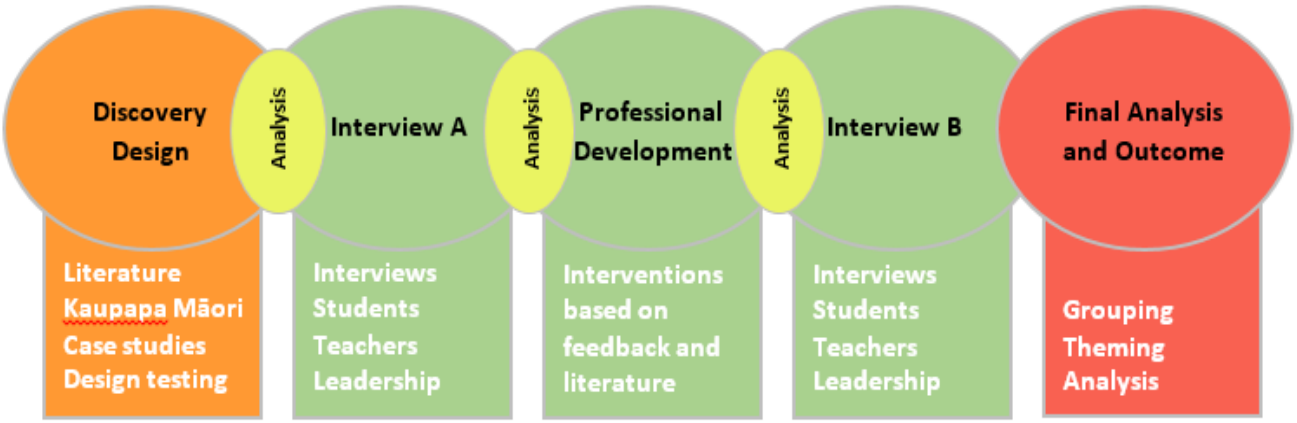
A particular emphasis at the beginning of the project was to build collegiality and high levels of trust between the researchers. Meetings were recorded and transcripts made available for reflection. Each team member was given tasks that best aligned with their strengths. Team meetings focused on the development of the conceptual framework, the functional components of getting the work completed and our own evolving understanding of the nature of professional development, and the changes we would need to incorporate in the next cycle of the project.

Relationship building, within and outside the project team, was critical to this work. Researchers were active participants in the case studies, arranging activities, and tracking outcomes through student feedback and teacher and stakeholder experiences. Underpinning our research practice and work with participants was a deliberate approach to feedback and presenting data in ways that encouraged both teachers and researchers to discover and co-construct strategies for action.

Project design

The research followed a staged approach to its design and implementation. Between the first four phases there were key opportunities for iterative analysis that informed not only the next stage but helped to make sense of the previous stages, as shown in Figure 3.

Figure 3: Project design



Phase 1: Case study development and design

Each institution selected two case studies, looking for programmes that had high proportions of Under-25s, were offered over a minimum of six months, and were delivered by more than one teacher. At the outset of the project, practical constraints of conducting this inquiry over five providers meant that, in some cases, there were additional selection criteria which the researchers had to accommodate. These included the following cases:

- Some programmes were selected because the outcomes could be improved
- Other programmes were selected as they were already showing excellent results for Under-25s, and the research team wanted to identify the key enablers
- Two programmes were undergoing redevelopment as part of an institutional move to a project-based pedagogy, and professional development for the teachers was seen as crucial to the success of this shift in delivery.

Due to this range of selection criteria and contextual variation, the research team identified early in the project that improvements in learner achievement would be variable across the 10 case studies. In recognising this variability, the team agreed early in the proceedings that quantitative data alone would be insufficient to reflect the impact of the planned professional development interventions. As a consequence, it was decided to investigate the role of the student voice in providing a clearer picture of their preferences around teaching and learning delivery and environment.

Following consultation with teachers and managers, the following 10 programmes were selected:

1. Bachelor of Computing Studies, Level 7
2. Certificate in Engineering and Trades, Level 3
3. Certificate in Computing, Level 3
4. Certificate in Engineering, Level 3
5. National Certificate in Tourism, Māori, Levels 3 and 4
6. Bachelor of Education, Level 7
7. Certificate in Vocational Skills (Core), Level 2
8. Diploma and Bachelor of Teaching Early Childhood Education, Level 7
9. Certificate in Building, Level 4
10. Certificate in Electrical Engineering, Level 2

During the project discovery and design began with a round of initial discussion about the project with teaching staff, stakeholders and managers in these programmes and agreements to participate were confirmed. Informed consent tools were approved during the ethics approval at the lead institution and later ratified in each organisation. These were used with all participants to ensure they understood the project and were aware of their rights to withdraw from the study at any time up until publishing.

Interviews were planned with the three participant groups (students, teachers and stakeholders) associated with each programme. Table 4 shows a breakdown of the student demographics within the programmes selected within each institute.

Table 4: Institutional data of student demographics of case studies, 2013 and 2014

2013	Wintec	EIT	BOPP	Waiariki	Awanuiarāngi
Under-25	91%	79%	82%	86%	31%
Māori	44%	34%	23%	62%	85%
Pacific	7.6%	3.8%	2.5%	7%	9%
2014					
Under-25	76%	77%	85%	84%	21%
Māori	52%	27%	29%	62%	73%
Pacific	8.6%	1.8%	3%	4.8%	15%

Questions for the three participant groups: students, teachers and stakeholders (learner advisors, staff developers and managers) were designed by the team during a collaborative hui. An iterative method was used for the development of interview questions and to inform the process design. This process was replicated across the project and helped to identify and fill gaps in the data collection methods. A pilot of the questions was conducted by two case study researchers in two different ITPs. Analysis of participant responses to the questions was collated and reported and feedback was discussed by the team and modifications to the questions were agreed prior to beginning data collection.

Phase 2: The interview A

Student interviews were completed through focus group meetings. The interviewers met with the students prior to the focus groups to explain the study and garner support for their participation. This process was in alignment with Kaupapa Māori approach, that is, time was taken by the interviewers to meet students, arrange short presentations about the project to ensure informed consent, and set up focus groups at the least disruptive times for the students. Light refreshments were supplied at the negotiated environment, which for most interviews were familiar class and learning environments, to help create a relaxed and welcoming setting.

Semi-structured interviews with the teachers, managers, staff developers and learning advisors were conducted in 2013 as seen in Table 5 on a one-to-one and/or group basis. Researchers taped these interviews and transcribed accounts and summaries were supplied back to each participant group.

Table 5: Number of participant interviews, 2013

Participant Group	EIT	BoPP	Waiariki	Awanuiarāngi	Wintec
Students	24	33	17	20	18
Teachers	10	4	10	5	6
Managers	3	2	3	4	1
Staff Developers and Learning Advisors	-	3	4	-	-

This initial data and feedback from participants ensured any professional development interventions would be based on responding primarily to the student voice/experience. This data was analysed with themes being shared and agreed across the 10 case studies. These themes were fed back to teachers and managers to inform the professional development decision-making phase.

Phase 3: Professional development

This phase enabled the first part of professional development decision-making to occur. A matrix of activities was developed that emerged from the research data, literature review and across our own community of practice as educators and staff developers.

Negotiated professional development and teaching intervention practices were identified, and agreed upon. New approaches that were deemed likely to improve outcomes for these Under-25 learners were planned and enacted over a year-long intervention phase in 2014. Some of the interventions chosen also linked to the teachers' own contacts and industry opportunities. For most of the case study participants, this involved a shift in teaching practices. During this phase, teachers received professional development support based on their usual organisational offerings, as well as additional mentoring support from the project team member(s) at their institute.

Models of professional development tend to rely on an ad hoc approach of largely unrelated, unsupervised and reactive responses (Darling-Hammond, 2006). Better programmes, according to this author, are integrated and personalised to the teacher's context and recognise the three key requirements of preparing teachers for a changing world: knowledge of learners and their development in diverse social contexts, knowledge of subject matter and curriculum goals, and knowledge of teaching, pedagogy and classroom management.

This project took a broad view of what constitutes professional development to ensure that our initial data collection from all participants in 2013 would provide a broad basis for multiple opportunities and approaches to support decision-making and improve practice. Professional development activities emerged differently across the 10 case studies. Activities described in the Appendix within each case study allowed opportunities to showcase good practice and enabled teachers to reflect on their own practice, construct professional knowledge with their peers, and develop more collaborative relationships with their fellow teachers.

Phase 4: Intervention phase interviews B.

A second round of interviews with the same case study probed participant experiences and perceptions of the teaching interventions. These were negotiated and conducted at suitable times in 2014 – the intervention year.

Table 6 summarises the number of participants who were interviewed in each of the five institutions in 2014. Thematic and content analysis methodologies were used to enable constant comparison of the data collected throughout this year, in order to measure the three participant group responses to chosen interventions and track professional development decision-making and outcomes. In keeping with the kaupapa Māori methodology, the team ensured that students were well informed of what was involved in the research, and that the environment was comfortable for data collection. Developing and maintaining high trust, confidential, collegial and supportive relationships with staff and all participants was extremely important across the project.

Table 6: Number of participant interviews, 2014

Participant Group	EIT	BoPP	Waiariki	Awanuiarāngi	Wintec
Students	32	78	59	62	56
Teachers	11	6	10	9	6
Managers	4	5	3	4	2
Staff Developers and Learning Advisors	-	3	4	-	2

Phase 5: Data analysis and outcome

All intervention phase interviews were taped and transcribed. The transcripts were returned to participants to check before analysis. A thematic analysis allowed a detailed account of the data, with team meetings used to moderate process and identify emerging themes and responses. We followed the six phases of thematic analysis advocated by Braun and Clark (2006):

1. Familiarising ourselves with the idea of 'living the data', including repeated reading of transcripts to search for meaning and patterns within the data
2. Generating initial codes and organising data into meaningful groups
3. Searching for themes and sub-themes initially using NVivo then moving to highlighting texts and comparisons and team moderation activities after experiencing technological and license issues across the five organisations
4. Reviewing and re-reviewing themes to analyse the entire data set and how they fitted together
5. Defining and naming themes and deciding on the essence of each theme, noting anomalies and contradictions, to record what was of interest and importance linked with sufficient evidence
6. Reporting, using vivid transcript extracts as examples and relating these back to the analysis of the research question and literature (p. 87).

Interviews with stakeholders were summarised, following transcription, into 'what you suggested' and 'what we did' tools to capture the multiple responses and outcomes. This process once again emphasised the importance of the student experience focus, including their feedback on learning and teaching strategies and activities as these were implemented. Teachers were also able to contribute to their own developing knowledge, with the researchers acting as supportive mentors throughout the implementation phase.

The data collected and analysed from the stakeholders assisted the consideration by the team of effective learning and teaching resources and the agreement to develop these as further outcomes of this project. The case study data was then submitted in preparation for a writers' hui in Taupō in December 2014 where the researchers were able to look at cross-institutional experiences and analysis and further interrogate their experiences, assumptions and learning. The following section was distilled by the researchers working in writing pairs considering all of the case study data cross organisationally in three key strands – student, teacher and stakeholder voices. This data analysis was shared and ratified during team meeting in early 2015 and linked to the quantitative data.

FINDINGS: LISTENING TO THREE VOICES AND CASE STUDY REVIEW

The 10 case studies provided a unique learning setting to engage with the multiple layers of data, to inform decisions around professional development and identify practices and activities that were successful for Under-25 students through the intervention phase. The case studies are summarised in the Appendix.

Collecting the participant voices was a core element of this project. The student, teacher and stakeholder voices informed, guided and decided the project outcomes as they provided a richness of data and 'realness' of evidence upon which to build our professional development decision-making model. The following summaries communicate the highlights, challenges and opinions of each participant group.

Improving learning success involves multiple considerations such as quality and access to resources, curriculum design, teaching practices and pedagogically-based learning strategies that support successful student learning engagement and outcomes. Effective decisions about what needs to be added or altered are made by listening to the voices of students, teachers and stakeholders. An integrated professional development decision-making model is essential because effective interventions require buy-in from all levels of the organisation, in a top-down, but also bottom-up responsive action (Savin-Baden et al. 2008). The findings discussed in this section represent a cross-section of feedback from across the 10 case studies, and five organisational settings, collected via focus group meetings and interviews.

Each of the sections reporting participant comments and themes begin with focus questions. The project team developed these to facilitate reflection on the process of data collection. These questions may also be used by readers of this report to apply the new Integrated Professional Development Decision-making Model in their context.

1. What did the students tell us?

Focus questions

1. What are the cultural factors that influence how teachers can provide quality teaching and learning and student support for Under-25 students?
2. What are the structural factors that impact on the learning of Under-25 students in the classroom environment?
3. What are the political factors that affect how Under-25 students learn?

Quality teaching and learning environments with student support

> "*I didn't really enjoy school, I just wasn't focused enough. I didn't do as well as I could have.*"

Most students told us the transition from secondary school to tertiary education was a positive experience. They liked the smaller class sizes which enabled them to make connections with peers and with the teachers. For some students, access to learning support and health services was pivotal to achievement:

> *"It's good; there's always help if you need it. If you need to call education service it's good. And having the doctors and the nurses there, it's cheaper too."*

The students' views of what was working well in their study included:

- learning new content – *"Tests your patience, which is a good thing – good for body, mind and soul."*
- hands-on learning, classroom practical stuff – *"This course is more like the workshop."*
- working together, sharing knowledge – *"Your team mates help you out a lot."*
- information is readily available (online, Moodle)
- the tutor's content knowledge – *"The tutor knows his stuff; he 'gets us', treats you like an adult. He helps us succeed."*
- learning real skills rather than just theory
- the tutor is open minded to different ways people think and learn and recognises disadvantages and helps students work through them – *"He will do it and show you then you can understand better rather than just saying it so you understand better. He is encouraging and physically helps you."*
- noho, group work, sharing and working together – *"This course helps us to be us".*

Relational and relevant learning and teaching

Student comments related to this theme indicated that both teacher and institution need to be more learner-centric: "*The teaching and learning needs to be about us, not about credits or credentials*". Students preferred regular feedback that helped them to check their progress, and the use of different technologies.

Some students preferred working at their own pace and having one-to-one time with the teacher, whilst others preferred opportunities for group discussions and activities. Appreciating being given choice in how to learn was evident in the feedback with comments such as, "It's really good when we are allowed to choose our own team; we are not pitted against each other" and "I like the group reading activities where in small groups we read something and then discuss what it means to us individually and as a group". Additionally, a number of students stressed the need for the teacher to "give us time to get it, it takes a while to sink in". This was described by one student as, "I like to go

away and think and reflect and then come back and discuss. I like my own time to sit down and read stuff and the one-on-one with the kaiako".

When the students were asked how they helped themselves to learn, they identified a range of actions and behaviours such as, "Prepare for classes; turn up for class; be on time", and in the classroom setting, "Do your work and set your own standards". Students also talked about wanting the course content online, enabling them to check their own learning progress and being able to work on their own projects with online guidance. Better planning and a clear structure were also mentioned by several students, for example: "Better organisation before the course is needed because materials were not there. It was an absolute shambles to be honest".

Students indicated that they were able to recognise and develop their own ways of learning and appreciated the availability of learning technologies. Their learning preferences included:

- media-rich environments
- one-on-one assistance and small classes
- learning in groups and working as teams
- online learning activities and providing central learning spaces
- plenty of visual aids

A further area students identified as important, was the teacher asking the students what they need to assist their learning:

> "*The kaiako are open to asking us about how we want to learn the content which is something we never had at school. They encourage us to give suggestions and are always willing to try things that we think might work"*.

Several students emphasised the need for a mix of practical and theory. As they said:

> "*Talking then doing – a bit of theory and then practice. Once you practice it you know it and can talk about it too.*"
>
> "*With practicals you just see what is happening, with theory you just see numbers but when you have a mix of the two it really helps.*"

Students emphasised the relationships formed with their teachers and peers. Teachers who used humour and showed empathy were recognised as having significant effects on the learning environment. Students were aware of learner-centric teaching and how this impacted their ability to learn. As well as identifying a large number of individual teacher attributes they thought the teacher needed to possess, the students believed the teacher should acknowledge the students' skills, experience and qualities. "*They should acknowledge the expertise and knowledge we bring to the classroom*". The importance of the teacher's interpersonal qualities and relationship-building skills was evident in comments such as:

> *"To know me is to teach me.*"
>
> "*The teacher is pretty key as in the past my teachers kinda put me down.*"

When the students were asked how they knew they were 'doing okay' in class, they attributed feedback from the teacher as a key measure of success: *"The teacher keeps track of where you are and tells you if you are slacking and to wake up".* They valued the teacher's feedback on their assessments as a guide for measuring their learning progress and highlighted how they particularly appreciated the speed with which they had their assessments returned and the quality of the teacher's comments on these. Self-marking their assessments online was also perceived as a high-value strategy as it gave instant feedback on self-achievement.

Employability and higher learning transitions

Students recognised the need for a qualification to increase their options for employment: "*I need to do something with my life*". Future goals included earning money, getting careers, gaining qualifications and getting apprenticeships:

> "*This course is sort of just giving me an understanding about being an electrician so I can go out into an apprenticeship with some knowledge instead of going in blind*", and "*I want to build my own house. There's lots of work for builders. I want to be rich*."

The importance of education and being open to learning was apparent in the students' feedback: "*It makes you think you should have stayed at school",* and *"It is working, better than ever. I am learning something. It is actually happening."* Other comments focused on students' ability to leverage their qualification for meeting career aspirations, such as pathways into higher qualifications or getting a job. Getting an apprenticeship ranked highly with trade-based student groups.

An overwhelming conclusion which can be made from the student feedback is the need for teachers and stakeholders to be aware that students themselves know best what they need for their learning. Such an understanding reduces the likelihood of assuming that it is up to the teacher alone to decide how best to facilitate and support learning. This position also requires a commitment to continually creating opportunities to seek and give feedback on progress.

2. What did the teachers tell us?

Focus questions

1. What are the cultural factors that teachers need to consider for effective teaching and learning in the classroom for Under-25 students?
2. What are the structural factors that teachers need to consider for effective teaching and learning in the classroom for Under-25 students?
3. What are the political factors that teachers need to consider for effective teaching and learning in the classroom for Under-25 students?

Student-teacher relationships, student support and pastoral care services were seen by teachers as essential to student success. Making learning relevant to students' goals was crucial to student engagement and achievement. Strategies for supporting student learning included such things as prompt feedback, identifying student needs early, and well developed teaching and learning resources.

Redefine, reframe and reposition professional development

During individual interviews before and following the case study intervention, teachers mentioned a number of activities which they saw as effective professional development influencing their practice, underpinned by how they think about their teaching, their level of experience, and their understanding and engagement in reflection:

- formal training such as completion of an adult education qualification
- gaining a comprehensive understanding of learning theory and how theory can be applied in a classroom setting
- communities of practice
- peer observations
- critical conversations
- mentoring
- reflexive diaries
- development of critical reflective practices:

  "*My understanding is growing. Constructivist and inquiry approaches have helped me get my head around technology. I am still passionate about changing my course and the pedagogy. The course helps you analyse what's working and what's not working."*

- informal professional development being such as 'on the job' – "*We as the kaiako need to take control of this space more, acknowledging our own communities of knowledge and our expertise."*
- peer/collegial support*:*

  "It's about having a collaboration of people that are familiar with your class and creating a community of assistance collaboratively with a team. It helps you reflect on your teaching because you have others to pull you up if you are going off on a tangent".

Relational and relevant learning and teaching

Teachers strongly believed that developing and maintaining effective relationships with students was the foundation of positive learning experiences for students at all levels. The teacher-learner relationship was described as the cornerstone of all effective teaching and learning and particularly important for the Under-25s:

"*Without the right kind of relationships you might as well pack up and go home. I think that applies at every single level of education. It may be part of working more successfully with Under-25s. If they know that you like them and believe in them, that you are there for them, they will start to open up and take a bit of a risk and ask for help."*

"*Understanding them and where they come from and what they bring with them to their learning is important. You have to be very careful that you don't repeat the ways they would have been let down by or possibly shafted in previous educational experiences."*

Teachers identified important teacher qualities as:

- Being positive, caring, and empathetic
- Having a sense of humour
- Being genuine:

  "*You have to be real. You have to listen to them, don't lecture them, and never be sarcastic. Praise, humour, accept no nonsense, be organised and know your content. Be facilitators of learning. Be sensitive and aware, and critically think about how you will teach and work alongside them."*

- Being interested in students' goals, ambitions and interests, wanting to know what is relevant for students and adapting teaching to meet students' expectations:

  "*Spark the interest and generally try to do it first up with things they have never seen before to get them thinking."*

- Identifying academic challenges early and matching the required support to mitigate these:

  "*Point out through the use of learning outcomes and questioning the way we work with them and that this level of learning may well be different from past educational experiences including NCEA."*

- Responding quickly when students are not engaging or confused and making changes to teaching

  Reading the group and being able to respond quickly is an art.

- Integrating theory and practical components in teaching practice:

  "If students are able to work independently, see connections to other knowledge, see the link between theory and practice then you know they have got it. I look at them and yep, see they have got it. If there is a trend and half of them have not got it then I know I have done something wrong. I will go and look at myself, self-review and try again. I kind of see it in their eyes, whether they are tuned in to what's going on. Body language is really important. Are they engaging in discussion, is there conversation back and forth?"

- Making the learning 'real' by providing active learning opportunities that relate to industry and disciplines:

  "Making it relevant to what they love is anything that connects to their reason for being there. You will very soon lose them if this does not occur. There needs to be strong links between theory and practical application. Students get impatient when things get too theoretical and heavy".

- Setting boundaries and clear expectations

Using a variety of informal evaluation strategies to check student progress and collect feedback from the students on their learning experience was also emphasised as an important process for checking relevance of the learning, through such methods as:

- engaging students in group discussions
- impromptu informal feedback
- formal institutionally required feedback processes
- one-on-one discussion with students
- involving students with peer decisions about the way they want to learn
- quizzes
- verbal and written review questions
- practical demonstrations
- observation of body language.

Learning about the students' families and social realities and their educational backgrounds early in the programme was viewed as a key way to gain a good understanding of what might facilitate effective learning for the Under-25s, as noted below.

- Begin the interview process as early as possible:

  "The interview process should begin to examine the student's background, current situation and motivation for coming as well as sharing important information about the course and our expectations of them."

- During orientation, students and teachers get to know each other. Including team building activities and tasks which help teachers get to know students individually builds rapport, connection and trust:

  "The first day is eating and getting to know each other. The second day we do reflections, goal setting, time management and the nitty gritty of what they are going to get in class."

  "Especially important at the end of the first two weeks where questions are asked – Is this what you expected? How is it going so far? Do you need extra help? And at the end we give them feedback about where we think they are."

- Use activities where students get to know each other.
- Involve the families as much as possible:

  "Whānau/caregivers or other support people are also encouraged to attend so they too can realise the importance of supporting the young person on their learning journey and gain some understanding of the course."

Reflective and reflexive teaching and learning practice

Reflecting on practice and being reflexive were two prominent themes in the teacher data. Reflexivity differs from reflection in that the process examines both oneself as a teacher and as part of an institution, and the role that both play in the construction of knowledge-power relationships in the teaching and learning process. Such a process, requires teachers to reflect and understand the role they themselves, and their environment play in achieving positive (or negative) outcomes for students.

Different avenues were available for ongoing reflection, and the teachers were able to create their own opportunities and space for reflection and reflexive responsive action. These included discussions of their teaching with colleagues, at team meetings and during peer observations, which were a useful way to have professional conversations about whether a teaching technique was working or not and why.

It was obvious from the teachers' feedback that a passion for, and commitment to, ongoing improvements in their practice underpinned effective teaching to support the learning of Under-25 students. A range of self-directed and externally provided professional development activities and initiatives were shared and included:

- willingness to share ideas and resources with peers
- trialing new strategies and methods based on literature review and self-reflection
- asking students what they think of new initiative/s being trialed
- changing lessons constantly to keep students attention
- modelling what is expected from the students

- considering the importance of accepting the knowledge students bring with them as true and valid:

  "*It is about affirming and validating that what they know as Māori is true, honest and correct. It is not just mainstream knowledge which is valid. I do this by encouraging them to share their experiences and tell their stories and I share mine, as a Māori."*

Leadership-driven quality teaching and learning and staff support

Leadership which supports them in their practice and encourages them to engage in professional development was emphasised by the teachers as influencing quality student learning. Key sources of support for the teachers ranged from opportunities to discuss issues and share ideas with the whole team identifying:

- peers, colleagues, , managers, learning advisors and professional development support staff
- Head of Department who embraces change
- engaging in, trialling and implementing new teaching and learning initiatives

Quality teaching and learning environments with student support

The teachers viewed quality teaching and learning environments with student support and pastoral care as playing a major role in assisting students to succeed, suggesting that the Under-25 students often needed extra assistance. Teachers saw themselves as the "*first port of call*" when students had concerns although they encouraged students to seek help from other support services as well. External pastoral care options were described as positive mechanisms of support student. However, teachers expressed beliefs that there is often reluctance from the younger students to access pastoral care outside the classroom environment. Within the classroom, support from the teacher was more acceptable when the teacher:

- acknowledged that most students saw themselves as connected to others:
  "*Students come here not on their own, but part of a wider whānau. Maybe it is time to look at this, especially for our young learners."*
- understood how the students' worldviews could be used positively within learning opportunities
- created environments of respect, trust, and sensitivity, where teachers encourage self-efficacy and believe that their students will succeed:
  "You can list all the things you need to engage Māori students to succeed but it is the doing part which actually makes a difference. My colleagues are genuinely there for their Māori students. It is the attitude and genuine wanting to that makes a difference with this team".

Based on the findings from teachers in this project, it is important, when considering professional development decision-making, to ensure there are no assumptions made about there being one single correct way in which to provide professional development:

> *"The project combined with the observation and feedback processes and all the different steps we have done this year has definitely been quite a heavy workload – it has taken up quite a bit of time … emotional and intellectual energy … but I think it has really intensified our resolve to do the things we know work – such as reflection."* (Case-study teacher)

It appears that professional development for tertiary teachers needs to move away from an ad hoc and reactionary approach, towards a reflective, proactive and flexible decision-making model. Such a model provides teachers with the support to choose professional development which is likely to improve their own teaching and lead to successful outcomes for their students.

3. What did the stakeholders tell us?

Focus questions

1. What are the cultural factors that leaders and support staff need to consider for effective teaching and learning in the classroom for Under-25 students?
2. What are the structural factors that leaders and support staff need to consider for effective teaching and learning in the classroom for Under-25 students?
3. What are the political factors that leaders and support staff need to consider for effective teaching and learning in the classroom for Under-25 students?

Stakeholders in this project included programme and group leaders, Heads of School and Departments, Academic Directors, learning advisors and staff developers. Their views on effective professional development were congruent with what teachers identified in that a one-size-fits-all model was not effective. Over the duration of the two-year project, both teachers and stakeholders' views of effective professional development decision-making evolved as they gained a deeper appreciation of what professional development means. Effective leadership emerged through the data analysis as highly significant when teachers were making decisions about professional development, especially when the decisions involved taking part in non-traditional activities and required willingness to consider and mitigate structural, political and cultural influences.

Relational and relevant learning and teaching

The stakeholders were united in identifying a number of quality determinants for enhancing Under-25 success, and that teachers need:

- an understanding of the social, cultural and political context that impacts on their practice:

  "Resources and content in their courses need constant review and there is a very clear journey and story to move toward what industry want"
- assistance to build a toolkit of pedagogical strategies, skills, techniques and activities to utilise various mediums, including media and online resources, for content and curriculum engagement:

  "A lot of the tutors are coming out of industry and employed primarily for industry skills. They do not have the depth of teaching background in some of these areas and not aware of what a teachers role is, beyond subject material."
- a diverse range of teaching styles and be aware of the influence of student cultural and social diversity on their pedagogical practice:

  "Know what the students are into and teach how they learn"

  "Listening to the student's constructive feedback… is the biggest"

- to develop practices to teach *through* culture rather than *about* culture, and appreciate and demonstrate values that emphasise a collective process of learning as opposed to a focus on individual achievement:

"There is a need for cultural identity to be normalised through what and how we do things here at the wānanga – Manaakitanga, whanaungatanga, and aroha are values that are demonstrated in these classrooms by the students. This drives the collective toward achieving success together … The importance of whānau and cultural responsiveness needs to be evident so we need to make sure we consider what is happening to students inside and outside the classroom. Bringing whānau into the learning environment is also important."

- to keep learning relevant and engaging – bringing together theory and practice that enables opportunities to constantly reflect on theoretically informed practice and vice versa.
- to demonstrate a genuine concern and care for students that goes beyond the classroom:

  "You are not only teaching your subject in your area you are also confidant, counsellor, and problem solver and someone who gives advice. The role is beyond subject material. Includes … Life outside – family life, financial, relationships – impacts".

Reflecting on these responses prompted the project team to develop a number of critical questions for management and stakeholders. These questions are intended to assist with focused planning and decision-making when considering professional development design and implementation.

Critical questions for managers and stakeholders:

1. What do I need to do and know to support teachers to cater for students with diverse needs?
2. How do I support and facilitate staff development that ensures the diverse needs of students are met in my organisation?
3. How do I promote and ensure that teachers have access to a range of opportunities to develop pedagogical, learning and teaching skills to adapt to their own contexts?

Leadership-driven quality teaching and learning and staff support

"I think as a leader you have to know that you do not achieve all of the results yourself. Your team achieves the results and your job is to create an environment and support other people to be effective, efficient and to do a good job. You are only as good as a leader as the quality of education being provided by your team."

All stakeholders agreed that leadership is important to promoting an environment that enables staff to make effective decisions about their professional development:

- Leadership needs to reflect an understanding of the both content knowledge and pedagogical knowledge. Teachers need support to develop and nurture meaningful and relevant learning environments. This involves utilising both theory and practice through experiential and context-based learning:

  "You cannot be a manager of teachers unless you do some teaching and create a change environment where it is okay to try new things out, even if you know it will

not work , because you know they will learn from it; the building of the team is more important than being correct every time."

- Effective communication and provision of opportunities for staff to lead at varying levels, especially in the classroom, creates a culture that promotes leadership and empowerment:

  "Creating an environment where the student takes ownership of their learning by having a strong team and support network that surrounds the students without creating dependency behaviours."

- Leadership should model a clear and consistent focus on improving success for all students and especially Under-25 students that includes encouraging innovation and teachers' personal/professional growth:

  "If you want people to do a good job and want them to be able to do a good job over and over again – and find better ways to do stuff and come up with ideas themselves, then there are some real similarities between how we teach (effectively) and how we learn."

- Teachers should be provided with support and resourcing that fosters productive relationships with staff, colleagues and students. Such resourcing includes adequate student pastoral care and provision to support and enhance student learning experience:

  "We will provide the best quality teaching which includes the environment you are exposed to, teaching materials, resources and support outside the classroom. Rather than students having to meet tutor expectations and needs, the programme designs are much more contextualised … to the content in the programme – flipped classroom, let them design their own learning package and research themselves, industry visits/speakers."

Structural and operational factors were mentioned as challenges to providing effective leadership. This included increasing workloads that related to financial resourcing, compliance, surveillance, monitoring, and evaluation. Academic leadership was identified as a key factor in negotiating relationships to enhance decision-making across multiple levels:

"Tutors knowing their place and role institute-wide, understanding the whys and why nots of institute decisions."

A further set of critical questions emerged from this data for managers and stakeholders to consider when making decisions regarding leadership-driven quality teaching and learning, as listed below.

Critical questions for managers and stakeholders:

1. What team based processes are required to ensure whanaungatanga and a positive collective learning environment for Under-25 students?
2. How is data relating to student engagement and achievement analysed and shared to inform teaching in your teams/organisations?
3. Is reflective teaching practice fostered and underpinned by a range of learning theory and evidence-based practice for Under-25 students?
4. What opportunities are available for staff to develop innovative creative teaching strategies which reflect care ethics for students?

Professional communities of practice

A key professional development activity in the project was the emergence and focused development of communities of practice. Communities of practice were described as providing both effective professional development and impacting on effective professional development decision-making. Developing sustainable communities of practice were seen as creating and promoting:

- co-construction of knowledge
- sharing of teaching and learning experiences
- reflection on practice
- development and sharing resources
- opportunities to bring in outside expertise:
  "*We discuss student issues where students have been home schooled for example… I class that as professional development going to Genesis and Wintec to find out who does this well…. Going to a course is like getting hit by a shot gun – it might miss completely. With a small team you can take everyone and come back and have a discussion and everyone has input*".

Communities of practice and informal professional development where sharing skills, knowledge, ideas and resources were viewed as very powerful to effecting change in teaching and Under-25 student outcomes.The stakeholders talked about communities of practice as offering opportunities for teachers to:

- collate pedagogical toolkits of success and achievement including whanaungatanga, aroha, te kotahitanga and manaakitanga. Such concepts demonstrate the teacher's recognition of the cultural and social capital of students.
- create a more collective and inclusive approach to professional development which involves teachers, staff developers, managers and students.

A final set of critical questions emerged from this data for managers and stakeholders to consider the decisions they make regarding professional communities of practice as listed below.

Critical questions for managers and stakeholders:

1. What skills and knowledge is required to ensure teachers have access to a range of pedagogical and learning and teaching skills to adapt to their own contexts?
2. How do we ensure all teachers have access to what successful teaching means for their Under-25 learners, cross-organisationally?
3. What values, principles and theories support teachers to develop effective practices in a culturally safe way?

4. Course completions

The aim of this project was to develop a professional development decision-making model to increase successful outcomes for Under-25 students, explored through ten case studies. The Appendix contains a description of the case studies, interventions and outcomes. It also contains the associated student comparative course completion data over four years – two years before the project (2011–2012) and two years during the professional development intervention period (2013–2014). In reviewing the quantitative data, it is important to remember that the ten case studies were selected for a variety of purposes. Some were chosen because the outcomes could be improved, some because were already showing excellent results for Under-25s, and the research team wanted to understand what the key enablers were and some because they were undergoing redevelopment as part of an institutionally wide shift to project-based pedagogy. Unsurprisingly, the quantitative data is mixed.

In addition, it is important to note the position that each case study occupied in the two years preceding the research project (2011–2012). In these years, some programmes demonstrated upward trends before the professional development interventions occurred, possibly as a result of the TES, in which Under-25 students were a priority. However, in the same period, three of the programmes had experienced student course completions below 60% and during the project's timeline, made the largest gains in improving course completions.

Table 7: Summary of impact - Quantitative findings

Case study #	Post intervention impact		Comments relating to impact on all students in case study programmes
	All students	Under 25s	
1	Positive	Positive	Small Under-25 student gap closed
2	Negative	Negative	For all students especially Under-25 students
3	Positive	Positive	Over 90% course completions
4	No impact	Positive	Over 90% course completions
5	No impact	Negative	All students high course completions– low numbers Under-25 students
6	No impact	No impact	Low numbers Under-25 students
7	Positive	Positive	For all students especially Under-25 students
8	No impact	Positive	All students – maintained high course completions
9	Negative	Negative	No gap between Under-25 and all students
10	Positive	Negative	All students – maintained high course completion

For some programmes, demonstrably upward trends for all students and also Under-25s were visible (case studies 1, 3, 4, 7 and 8) as noted in Table 7. For other programmes, the gains achieved during the professional development intervention period were minimal, (case study 6) or showed a reduction in course completions (case studies 2, 5 and 9). One showed an increase in student completions for the wider student body yet a negative impact on Under-25s (case study 10). Those case studies showing a reduction in course completion data demonstrated greater vulnerability in the Under-25 student completions, compared with all students in the programme. Case study 8 was the only programme that showed a sustained gain in Under-25 achievement greater than that of the wider student body in the intervention year 2014.

This case study outcome data over the two years of the project indicate that the successful interventions, while focused on Under-25 students in particular, also positively impacted all students. Reduced course completions in other programmes may indicate a sub-optimal learning environment. Where these negative shifts occurred for Under-25 students, they also occurred for the wider student body, although to a lesser extent.

Analysis of this outcome data from the five organisations identified a number of factors that impacted on professional development decision-making, and, more importantly, the enactment of these decisions into subsequent professional development, and teaching practice. Most of the factors that negatively contributed to reduced outcomes can be attributed to the structural, political and cultural context of the organisation and the lack of overt valuing, support and resourcing of professional development for tertiary teachers.

This inconsistency in the outcomes data reflects comments made in the literature. Establishing causal links between teacher professional development and improved student outcomes is complex: a teacher's input into student success is just one of many variables in a multi-stranded process (Zepke et al., 2005). Other variables that may or may not have contributed to these outcomes include relationships between key staff, and management and leadership influences. Secondly, undertaking professional development does not automatically lead to improved practice, and where it does, the impact may take time to fully embed and evidence (Gibbs & Coffey, 2004; Timperley, 2011; Zepke et al., 2005).

A number of studies attempting to link professional development to student outcomes nationally and internationally provide key positions from which to further consider the quantitative data in this project. Probing the complex relationship between teacher professional development and improved student outcomes, Gibbs and Coffey (2004) analysed the teaching development programmes of 20 universities in eight countries, and found that "training aids educators in adopting a student-centred approach to teaching; and that students judge teachers who have undergone training as being better teachers" (p. 98). Brew and Ginns' (2008) research also pointed to a positive relationship between engaging in the scholarship of teaching and learning, and changes in students' course experiences. Both these extensive studies, further supported by Frick, Chadha, Watson and Zlatkovska (2010), emphasise multiple measurements of effect, including student evaluation of teaching and positive and successful course experiences and outcomes, which are able to be cross-referenced to professional development interventions.

Naidoo and Holmes' (2011) study in New Zealand universities focused on large, first-year classes, tracing academic development interventions and student achievement. Their data suggested "there was a link between teachers' sustained engagement with staff developers and learning and teaching strategies and intentions, and the improvement of student learning outcomes" (p. 202–203). They caution, however, that it would still be problematic to claim there was a directly attributable causal link between academic development and sustained increase in student learning outcomes" (p. 203). Other variables that impact on such claims include organisational, political, cultural issues (Doherty, 2012), resourcing and sponsorship, relationships between key staff, and management and leadership activities. Sword (2014, p. 791) states, "in the realm of academic development … practical and temporal distances between academic developer's intervention, a lecturer's actions and a student's achievement render claims of direct cause–and-effect deeply problematic". Naidoo and Holmes (2011) agree and remind us of the importance of ongoing evaluation of effectiveness of academic development linked to student learning outcomes and the contextual complexities that must be taken into account.

In reviewing the comments made by these authors, we see close parallels with the current project. Presenting this quantitative data 'in isolation' draws only part of the picture, for example, we did not evaluate positive reasons for withdrawal from programmes, such as students gaining employment. Whilst linking course completion data to effective professional development to measure impact is complex, the team acknowledged the importance of the quantitative data overall which appears to continue to confirm the vulnerability of Under-25 students when compared with those of the student population as a whole.

The next section draws together our findings, and captures practices, or gaps, which impacted both positively and negatively on the student outcomes and experiences. The team acknowledges that the data is based on a single, year-long intervention and that additional longitudinal studies are needed to draw more definitive conclusions.

LEARNINGS AND OUTCOMES

Shifting practice and introducing change

Teachers and stakeholder participants reported positive incremental change in professional development engagement and teaching practices, with some identifying their nervous initial engagement in this project and how important the work became over the two-year journey. There were a number of important outcomes we aimed to achieve when we proposed this project. All of these were achieved to different degrees, as summarised below:

1. **Encourage and inspire teachers to engage in professional development that will support their teaching practice with Under-25s/all students**
   The level of active involvement by teachers with professional development depended on the organisational structural, political and cultural factors underpinned by effective leadership and resourcing. If each of these institutional factors support professional development, then teachers' engagement in professional development was high. In addition, the information and practices generated from this research has enabled us to create resources to support teachers' self-analysis, decision-making and engagement in new practices (see Table 8).

2. **Illustrate to the institution what sort of professional development is worthwhile**
   The use of case study programmes, with specific interventions and feedback from the students, teachers and stakeholders involved, provided detailed information about a number of effective professional development approaches. This project has led to a reframing and repositioning of professional development with a focus on valuing multiple strategies, activities and opportunities aimed at improving student learning and retention. Examples include external visits with other providers, focussed workshops, mentoring, industry visits and communities of practice.

3. **Influence higher level of decision-makers regarding the worthiness of supporting targeted professional development for Under-25 students**
   One size does not fit all. Under-25s have particular needs, and the Findings identified examples such as consulting students about how they want to learn, using practical learning opportunities and developing life skills alongside academic skills. When professional development emerged in response to student voices, and became targeted and contextually relevant, changes to teaching practice and student achievement resulted.

4. **Introduce/trial different approach to professional development decision-making by the professional development engagers themselves (the teachers)**
   Professional development seemed to be most effective when the teachers guided by the student voice were able to decide and choose the type of professional development they thought would best suit their needs and then were supported and resourced to implement these changes into their practice**.** Professional development decisions that were contingent on student feedback were powerful mechanisms for change. Teachers made confident choices and took action. Strategic and organisational commitment were found to be present in case studies whose outcomes were more successful.

5. **Identify what supports teaching and learning practice and what doesn't**
   The degree to which teaching staff participated and engaged with professional development seemed to have a direct connection with the degree of leadership and organisational support (structural, cultural and political) provided. This project enabled us to consider where investment is needed and how to focus time, energy and strategies for change with teachers and stakeholders. Professional conversations about teaching Under-25 students enabled shared reflective practices across the institutions. Most case study teams reported positive engagement in activities; some selected multiple approaches, while others focused on one or two.

Creating and applying a new model for professional development decision-making

Who in an institution can decide what happens for teacher professional development following this project, or any other professional development or teaching intervention? That is, who will champion the findings? This question arose as the project progressed and assisted the development of the Integrated Professional Development Decision-making Model (Figures 4 and 5) as a key outcome of the project.

Figure 4: Integrated professional development decision-making model

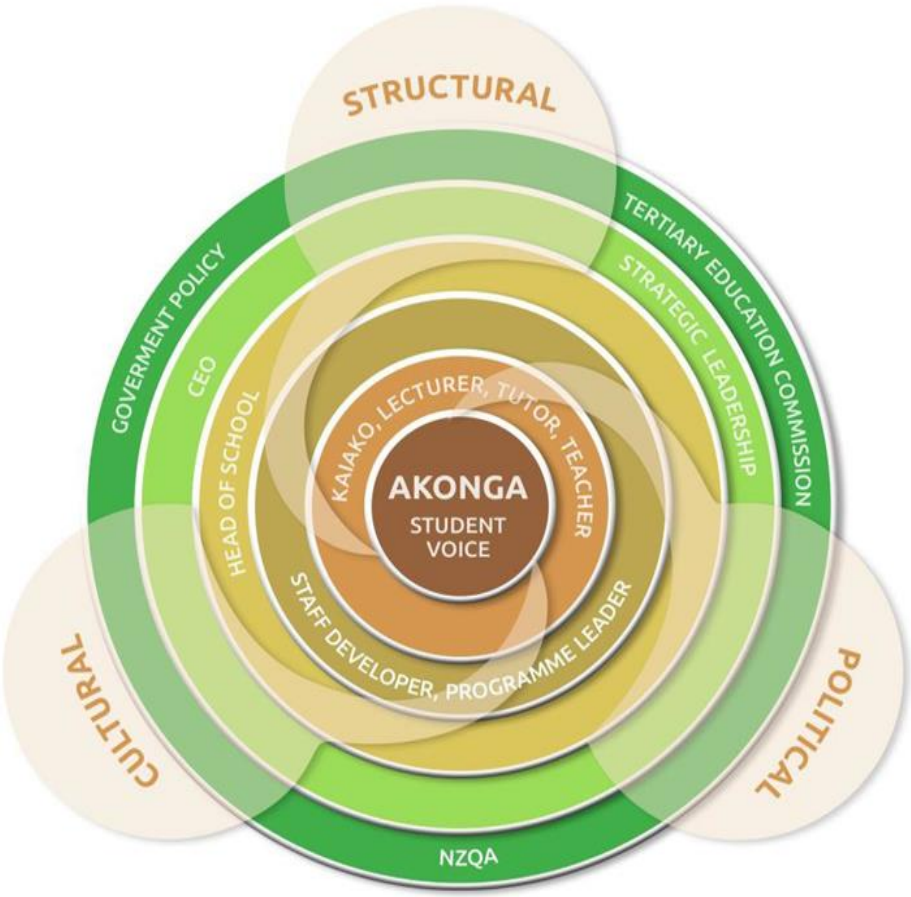
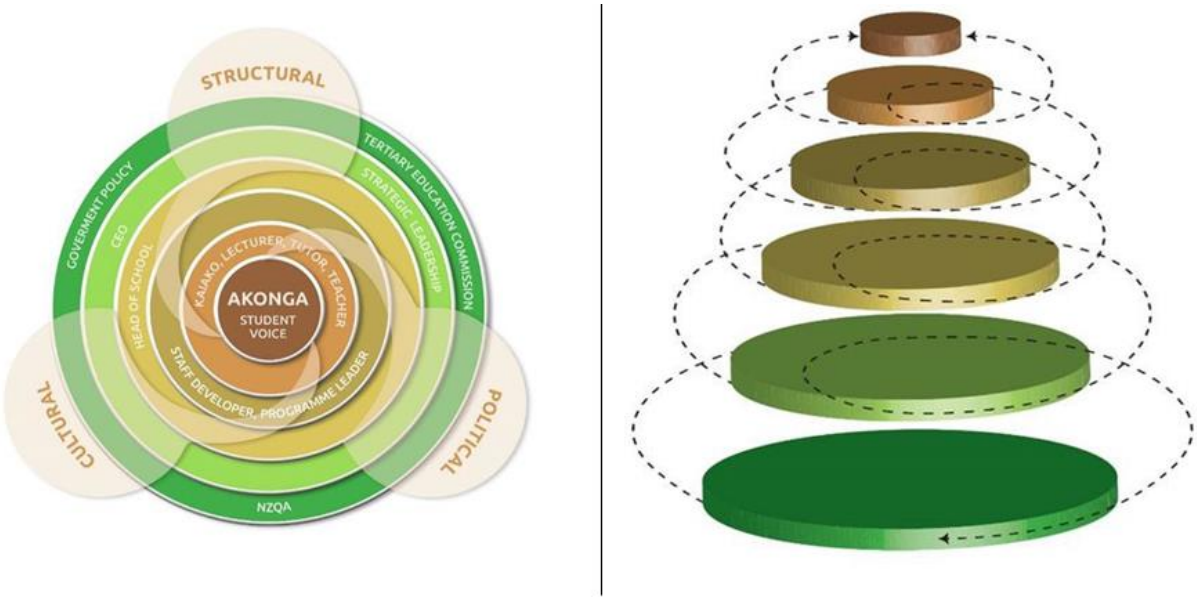


Figure 5: Three-dimensional and relational view of the model



The decision-making model developed from the initial conceptual framework (Figure 4) is a means to illustrate our findings of the multiple levels in which crucial decision-making occurs. This model clearly interlinks cultural, structural and political factors that influence professional development decision-making within organisations. The model of concentric interlinking circles reflects the various levels/layers of the change agents who influence professional development for effective teaching of Under-25 students. At the centre is ākonga/student voice. The notion of ākonga symbolises learning as a reciprocal relationship between teachers and students; essential to this relationship is continual dialogue with the student voice as the central interlocutor of this exchange.

In the three dimensional model above, as the student voice radiates outwardly, each level responds accordingly to positively influence professional development decision-making and access. In this model, formative and summative evaluations of learning and teaching lead to ongoing action planning and reporting that is highly visible and interconnected.

The quality of the decisions made at each tier is determined by many factors, including the cultural, structural and political aspirations that hinder or promote meaningful learning experiences. These can occur not only within the organisation, but are also reflective of the larger external environment, with governmental directives and policy.

The model promotes a critical approach toward professional development that encourages teachers, staff developers, programme leaders and managers to think more broadly about professional development decision-making and thus enable what Smith (n.d.) refers to as “transforming approaches within multiple sites using multiple strategies that are often simultaneously applied”. Such multiple sites and strategies provide opportunities for a number of organisational learning and teaching and human resource practices to be aligned. These include induction and orientation, performance monitoring and appraisal, professional development identification and planning and evaluation of impact. Found to be highly effective were operational planning and budgeting cycles that prioritise and ring-fence resources to enable reframing professional development toward everyday practices that encourage teachers’ dialogue through communities of practice and reflective opportunities.

The research team found that organisational, strategic and operational leadership is fundamental to positive attitudes towards professional development. In highlighting these research findings for Under-25s we believe that more consideration should be given to a number of critical questions posed in this report, including how decision-making about professional development offerings occurs, what is prioritised and whose voice is important. Above all, professional development and the teaching practice it supports need to be linked to student perspectives and outcomes.

Professional development resources for teachers

A number of resources and practices have been developed and implemented as a result of this project through integrated professional development decision-making and were further enhanced from participant and stakeholder feedback. Our own experience as a project team has also underscored the value of communities of practice to support practitioners working with Under-25 students. Further supportive mechanisms for both project team and participating teachers and stakeholders included collegial discourse, teaching focused team meetings and peer observations.

The eight resources which form one of the key outputs from this project are summarised in Table 8. Included are critical questions to facilitate the decision-making process for professional development and teaching initiatives to encourage application and changes in practice. Seven resources are intended for teachers' use with Under-25 students; Resource 8 was developed as a self-analysis tool for Under-25 teachers to assist with their own reflections and reflexive planning in change.

These resources are downloadable as separate files, accessed via the Ako Aotearoa webpage for this project www.akoaotearoa.ac.nz/projects/professional-development-improve-outcomes-under-25-learners.

Table 8: Professional development resources for teachers of Under-25 students

Resource	Explanation	Critical questions for utilisation/PD decision-making
1. Orientation and whakawhanaungatanga: activities for Under-25 students.	Starting the course with positive relationships between learners, teachers and other support staff is highly important. We suggest you use a number of activities and approaches to: 1. Establish a sense of group and connectedness 2. Know your learners 3. Work together 4. Link education and practice.	1. What resources and activities will I choose to ensure students build positive and connecting relationships at the beginning of their programme? 2. What planning do I need to undertake to provide a holistic, purposeful welcome to their programme, each other and the organisation? 3. How will I ensure students meet and discover all of the support people and resources they can utilise to support their success?

2. Establishing a community of practice (CoP) concept plan for teachers working with Under-25 Māori students	An overview and concept plan and guidelines for establishing a CoP for teachers of Under-25 Māori students, to share strategies, ideas and challenges with each other and support improvements in teaching practice.	1. What are the key challenges in my teaching of young Māori students 2. What do I do to get my students positively engaged in the learning? 3. How do I promote communication between the students with different backgrounds? 4. How do I identify students' learning needs and preferences? 5. What have I learned about myself and my relationship with young students? 6. What changes have I made in my teaching with young Māori students as a result of the community of practice?
3. Process for establishing and maintaining effective groups.	An overview and step-by-step process for establishing and maintaining effective groups and teams to enable educators to intentionally prepare, establish and enhance student learning.	1. How do effectively establish, maintain, and monitor groups to support student learning and course outcomes? 2. How can I promote the importance of the outcomes of groups to students (course, personal, industry, employability) to improve engagement and communication/participation? 3. How will I ensure I have enough resources and that all steps are carried out? 4. How will I support the content/outcome and processes of the groups, and monitor and evaluate these with students? 5. What will I do to ensure I continually reflect and challenge my practice in supporting groups and teams?
4. Peer observation of teaching	A process and templates for peer teaching observation and feedback. Enables reflection, review and action planning.	1. What did the peer observation process tell me about my teaching practice? 2. What aspects of my practice was I unaware of until I received this feedback? 3. What is the value I gain from receiving feedback from my peers to support Under-25 learners? 4. What do I need to do to follow through on my action plan (resources, manager support for professional development decision-making)? 5. What enquiry questions can I continually ask myself about my teaching? 6. How do I continually find out the learning needs of my students?
5. Timing teacher talk: A formative teaching observation tool	An eight-step process to gain quantitative and qualitative data from formative classroom observations to assist reflection and changes in practice.	1. How can I obtain some objective feedback of my teaching? 2. How can I respond to and act on student voice? 3. What professional development would be appropriate to enhance my teaching? 4. How can I produce evidence to capture critical reflective teaching practice?

6. Three-way teaching feedback	This resource helps to identify possible areas for teachers to change their practice to improve student learning. It takes into account data gathered from the teacher, their students, and a trusted observer. Includes a video example.	1. How could I measure that learning is taking place and appropriate for student success? 2. How do I ensure effective teaching and review activities occur in order for me to identify where I can make changes in my practice to improve student outcomes? 3. Which learning and teaching professional development activities do I need to engage in to improve learning for under-25 students?
7. Teaching young students workshop series	The session plan and associated resources provide a facilitator (staff developer, for example) with a process for planning, organising and facilitating a series of group workshops for teachers of young students.	1. What have I learned about my own teaching practice and its relationship with/influence on the learning of young students? 2. What knowledge and experiences in teaching young students can I share with colleagues? 3. How am I evaluating the effectiveness of teaching and learning strategies I have implemented?
8. Self-reflective analysis tools	These self-analysis tools were developed from the student, teacher and stakeholder feedback synthesising descriptions of effective teaching attributes and practices across all case studies. They are designed to be used to guide reflection and professional development decision-making and action planning.	1. What do I do to get my students positively engaged in their programme and learning? 2. How do I promote communication between students and teacher/students with different backgrounds? 3. How do I identify practices I need to develop for students' learning needs analysis and preferences? 4. What key challenges do I need to respond to and seek professional development in, in order to improve my teaching of Under-25 students?

CONCLUDING THOUGHTS

In response to the literature review, the learnings gleaned from observing and engaging with the case studies in progress, and professional conversations within our own community of practice, we continually asked: Are there differences in the teaching of Under-25s in our case studies, and the wider student population, and if so, what are they? Based on feedback from the students, teachers and stakeholders, and informed by the literature review, the following points were identified across the participant groups:

- It is important for teachers and stakeholders to be aware that students often do know what they need for their learning and to consult them on this. Avoid assuming that it is up to teachers alone to decide how to best facilitate and support students.
- Developing life skills alongside academic and work-ready skills is essential for the majority of Under-25 students.
- In three quarters of the case studies, the Under-25 students reported a preference for practical learning opportunities.

- Enabling students to make choices regarding how they approach their own learning is important.
- Providing a different structure and teaching and learning approach to the compulsory school environment is essential as many reported previous negative learning experiences.
- Technologies and visual learning media as learning tools are favoured ways to learn for Under-25 students.
- Establishing effective relationships between students, and students and teachers, improves students' learning experiences and outcomes.
- Pastoral care support mechanisms need to be in place to provide wraparound support and learning opportunities for students, who may also have challenging personal lives.

Certainly many of these characteristics apply for all students, not just the Under-25 cohort. However, this project confirmed that it is the extent to which all these factors are present in the learning environment, which has the most impact on student success and achievement for Under-25s. This student group are especially vulnerable to sub-optimal learning environments, as we noted in some of the case study cohorts, where student completions actually declined in spite of targeted interventions. So many factors at both macro and micro levels affect students' learning success and achievement, and the good intentions of a handful of teachers and stakeholders, without multi-tiered and organisation-wide support and resourcing, will not always be enough. Young students have fewer life experiences of resiliency to draw on, and require pastoral care and life skill development alongside academic programmes.

Given that these are what the Under-25 students need in teaching and learning approaches and environments, what professional development supports teachers in meeting these learning needs? Our study found that teachers of Under-25s need teacher involvement in decision-making. They needed a top-down, bottom-up approach to professional development that involved every level of the organisation, so that their efforts were not made in isolation. Teachers needed strong leadership that modelled the valuing and uptake of professional development.

How should this professional development be provided? This report proposes a decision-making model which involves every level of the organisation responding to student voice. The *Integrated Professional Development Decision-Making Model* (Figure 4) is based on seven key findings from the project, as outlined below.

Seven key findings from the project for effective professional development decision-making

Based on the contributions of student, teacher and stakeholder participants in this project as well as the ten case studies, seven key findings about what makes professional development effective for teachers of Under-25s are:

1. **Reframing and repositioning professional development:**

   The ideas, models and definitions about what constituted professional development were challenged in this project. The term itself was found to be loaded and problematic for some teachers, especially when any professional development was perceived as external and disconnected from the learning requirements of students. This research helped to provide a much broader student outcome-focused definition, positioned with student voice at the centre with associated goals, activities and resources being developed as a result.

2. **Relational and relevant learning and teaching:**

   Professional development which focuses on how to develop and maintain effective relationships with students is key to developing relational and relevant learning and teaching for Under-25 students and was reported to form the foundation of positive learning experiences for over three quarters of the students interviewed. Students, teachers and stakeholders also valued highly learning activities which are relevant and contextualised to students' lives, needs and goals.

3. **Quality teaching and learning environments with student support:**

   While the creation of a positive learning environment appears to be dependent on the quality of the teacher-student relationships it also includes recognition by teachers of the cultural and social aspirations of students along with the importance of the physical environment. Consideration and recognition of these aspects within a professional development model was seen by teachers as particularly helpful. Pastoral care was also a point for extensive discussion and consideration and its inclusion within a professional framework was welcomed by all three participant groups.

4. **Employment and higher learning transitions:**

   Teaching practices which enable students to lever their qualifications to meet career aspirations or to follow pathways into higher qualifications appeared crucial. Thinking about ways to most effectively achieve employability and higher learning transitions became part of discussions and chosen professional development approaches.

5. **Professional communities of practice:**

   Sustainable communities of practice where knowledge and resources are shared, contributed to developing critical practice and formed a significant professional development activity for teachers across the case studies. These communities also acted as a mechanism to help teachers confidently redefine, reframe and reposition their teaching practice through professional development.

6. **Leadership-driven quality teaching and learning and staff support:**

   Leadership which reflects an understanding of both content knowledge and pedagogical requirements and supports teachers to develop and nurture meaningful and relevant learning and improved environments also helped teachers make decisions about effective professional development options.

7. **Reflective and reflexive teaching and learning practice:**

   Reflective and reflexive capability appeared to be an important skill for engaging with change and an important focus for consideration by teachers working with the Under-25s. Reflexivity differs from reflection in that the process examines both oneself as a teacher and as part of an institution, and the role that both play in the construction of knowledge-power relationships in the teaching and learning process. Such a process, requires teachers to reflect and understand the role they themselves, and their environment play in achieving positive (or negative) outcomes for students. Teachers creating their own opportunities for reflection supported by collegial discourse, team meetings and peer observations proved, for those who participated, to be a transformative activity.

The contribution of this project

This project sought to develop a professional development decision-making model. During the project, cultural, structural and political factors that influence this decision-making, along with the student, teacher and stakeholder voice, were considered. The three-dimensional model described in this report, *the Integrated Professional Development Decision-Making Model* (Figure 4), calls for a broader and more collaborative approach toward professional development that repositions current understandings and enactments of professional development in the tertiary sector. While each organisational context is different, and the model's implementation will vary accordingly, core elements will be consistent.

In a smaller institute, for example, key personnel may lead the change at a number of levels; in a larger organisation with multiple campuses, this may be achieved through a unified vision, and long-term strategy and procedures, with collective responsibility for enactment and monitoring. In both cases, student voice is the starting point for a dynamic model which responds to the changing needs of our learners, their teachers, and the leaders and managers who work alongside them.

Assisting teachers of Under-25s to meet students' learning needs and learning preferences requires multi-tiered levels of institutional support and resourcing, as well as a suite of critical and reflexive tools. The model outlined in this report, the eight teaching resources which accompany it, and the extensive literature synthesis which has underpinned this two-year inquiry are all intended to meet the identified gap in current knowledge about professional development decision-making. The project team look forward to sharing these outputs with colleagues in higher education, and being part of the changes to provision for which our new generation of students are calling, and which they richly deserve.

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APPENDIX: CASE STUDIES

Each of the five institutions (four ITPs and a wānanga) selected two programmes as case studies that had high proportions of Under-25 students. In addition, we agreed the programmes selected needed to be offered over a minimum of six months, and delivered by more than one teacher to support professional development decision-making and interventions.

A researcher in each institution worked with the two case study programmes studies over the two-year period and carried out all phases of this research project. Organisation 4 provided three researcher participants for the project.

Following consultation with key stakeholders and analysis of student profile data, the following 10 programmes were selected:

1. Bachelor of Computing Studies, level 7
2. Certificate in Engineering and Trades, level 3
3. Certificate in Computing, level 3
4. Certificate in Engineering, level 3
5. National Certificate in Tourism, Māori, levels 3 and 4
6. Bachelor of Education, Level 7
7. Certificate in Vocational Skills (Core), level 2
8. Diploma and Bachelor of Teaching Early Childhood Education, level 7
9. Certificate in Building, level 4
10. Certificate in Electrical Engineering, level 2

The case studies are presented in this Appendix across the five organisations capturing the key professional development interventions and statistical data on course comparison between Under-25s and all students. Other features the researchers wanted to report to assist in the understanding of the context variations that may have contributed to these outcomes are also included.

Organisation 1

Case study 1: Bachelor of Computing Studies, level 7
Case study 2: Certificate in Engineering and Trades, level 3

Case study 1 was characterised by a high level of interest communicated by the Head of School for the teachers and students to engage in this research project. Case study 2 had a high percentage of young Māori students and both the tutors and managers in this case study were also very keen to participate in the project. Historically, the certificate programme has been over 85% Under-25 students and has had lower than average retention and success outcomes.

Implemented professional development interventions:

i. external visits
ii. practice placements and workshop practices
iii. formal peer observations
iv. talking teaching sessions
v. community of practice
vi. student feedback
vii. staff development workshops supporting Under-25 student success
viii. action planning

Choosing interventions

Using a matrix of professional development activity options, the tutors from both case studies met with their respective teams and decided what they thought would be useful professional development to increase Under-25 student success and what they could realistically engage in within the one-year data collection time frame. The tutors from both teams were particularly open to participating in formal peer observation and action planning, stating that they already carried out informal observations of each other's teaching. Encouragement from the tutors' managers was pivotal in the level of intention and willingness to engage in professional development interventions. In both case studies, the managers communicated a belief that the tutors have a great deal of value, wisdom and experience to share with each other and pass on to their students. The tutors appreciated being given the choice as to what they thought would support and enhance their teaching practice, which also influenced their engagement. Visits to other educational providers to share ideas, learn from each other and increase a collegial connection were undertaken as one of the professional development interventions increased opportunities for tutor professional development and student learning through industry visits were also organised.

Resources from interventions

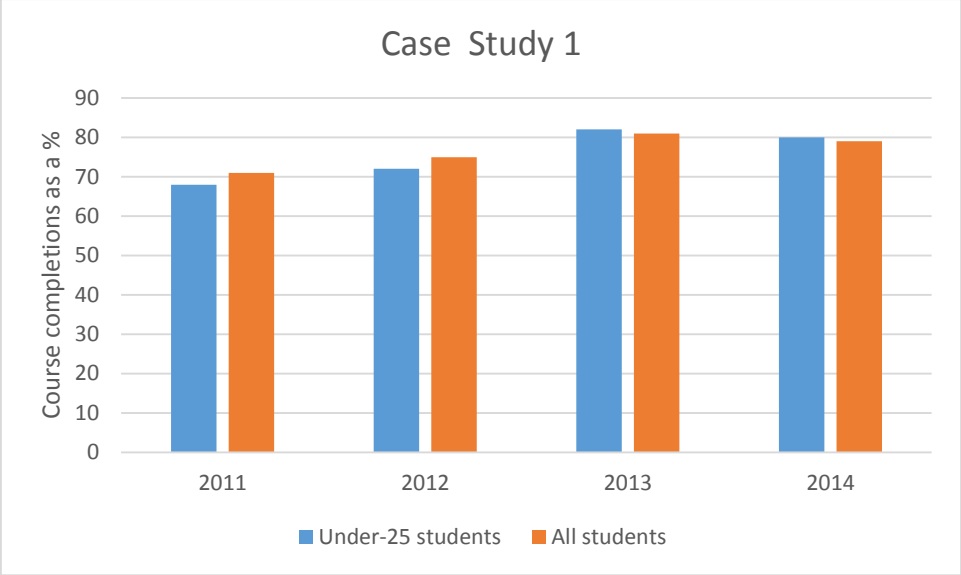
A series of four workshops facilitated over a six-month period were developed and offered by this organisation, in which the tutors explored topics central to teaching young students, such as how to engage students and managing adolescent at-risk behaviour. Turning disengagement into learning engagement was highly valued as part of this workshop series and has been turned into a project resource. Another successful initiative was a 'Young Māori Students Community of Practice', open to all staff, where tutors met monthly to share strategies, ideas and challenges with each other and evaluated their effectiveness in the classroom and beyond. This too is a project resource. A peer observation of teaching template was also developed as a resource for these two case studies.

Researcher feedback and analysis

Gathering and responding to student feedback was key in this project to facilitate both engagement and decision-making. Using a variety of sources of feedback, including the First and Last Impressions satisfaction surveys, monitor's report and the students' interview data as part of the case study project, was also important.

From the tutor interviews and their verbal reflections on the professional development activities in which they took part, it was evident that the tutors were already accomplishing good teaching and learning practices and were open to experimenting with new ideas and concepts which could enhance their practice. Also evident was the genuine intention of enabling positive learning experiences and outcomes for their students.

Figure 6: Course completions – Bachelor of Computing Studies, level 7, 2011–2014

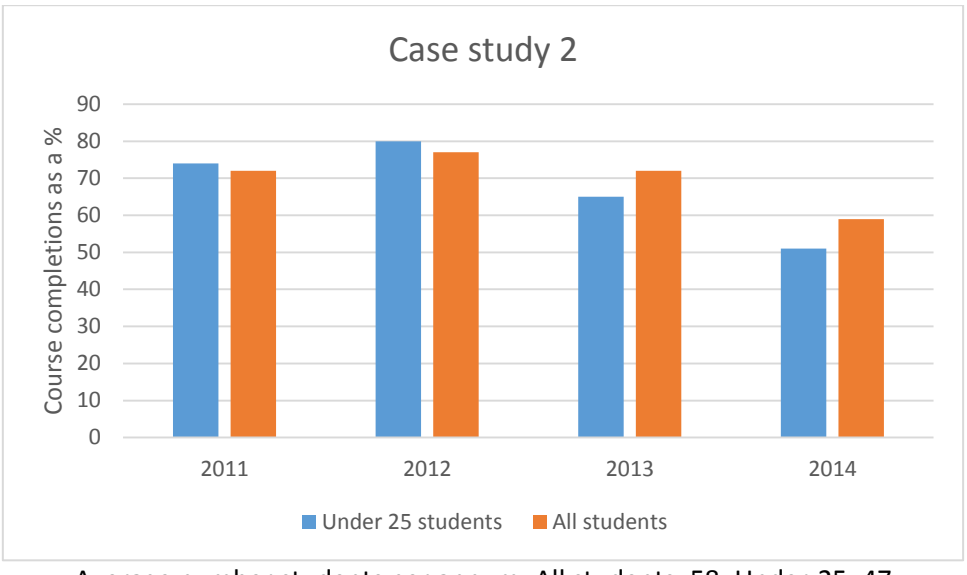


Average number students per annum: All students: 139; Under-25: 92

In Figure 6, a degree-level programme, the Under-25 student achievement was less than all students for the two years preceding the project (2011–2012). This gap was reduced during the project (2013–2014) where Under-25s showed an increase of nearly 10%. Of note, all students experienced positive gains in course completions during the project years.

In contrast, Figure 7, the level 3 programme, whilst showing Under-25 completions as higher than all students in the pre-project years, showed a significant reversal during the study period. This reversal effected all students and was more marked for the Under-25 student group.

Figure 7: Course completions – Certificate in Engineering and Trades, level 3, 2011–2014



Average number students per annum: All students: 58; Under-25: 47

These findings suggest that participating in professional development decision-making and a variety of activities designed to enhance teaching practice to positively reflect outcomes for students as a result is complex. Key follow through is required to support tertiary teachers through a complete model of change. Such a model of change requires tiers of interventions through structural, political and cultural interventions as the Integrated Professional Development Decision-making Model developed through this project suggest.

The researchers were particularly challenged by the quantitative data and student outcomes for case study two, as all participants were highly engaged in a variety of professional development interventions throughout the project. This level 3 student cohort was highly vulnerable to a variety of personal and external changes during the intervention year, as identified by the teaching team, which also negatively influenced their rate of course completions.

Organisation 2

Case study 3: Certificate in Computing, level 3
Case Study 4: Certificate in Engineering, level 3:

Case study 3 was a level 3 Certificate in Computing, a six month programme delivered twice a year. The key teacher is the Programme Co-ordinator (PC) with two to three additional staff delivering specific content.

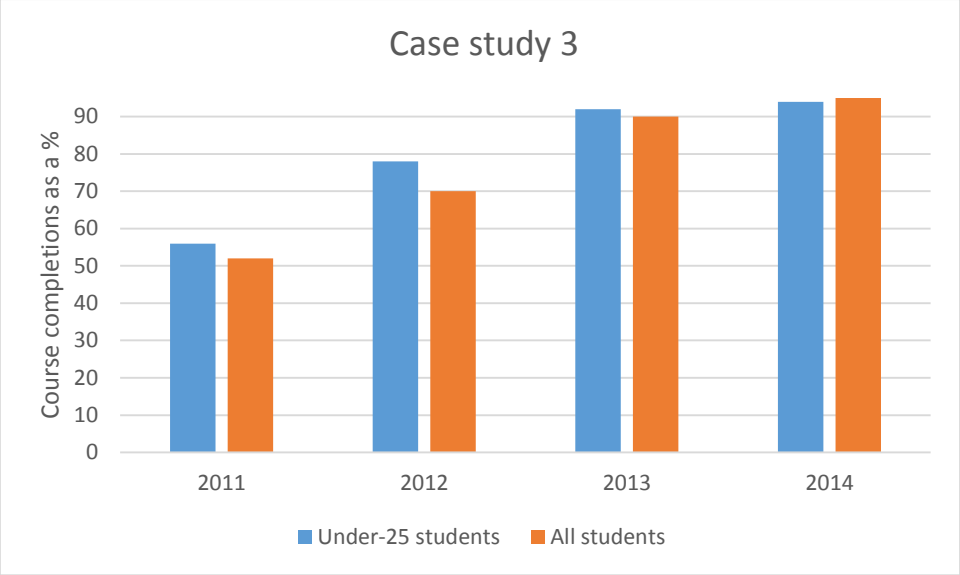
The majority of students are school leavers and second chance learners who do not have the entry requirements for higher level programmes and many reporting negative previous learning experiences. Students in this programme have historically been found to be highly vulnerable requiring a range of academic and pastoral care support. This programme sets out to embed fundamental skills, practices, knowledge and attributes to be successful in the information technology industry and supports students to progress to higher level programmes or work.

Implemented professional development interventions:

i. facilitated whakawhanaungatanga
ii. flipped teaching practice
iii. formal peer observations
iv. talking teaching
v. community of practice
vi. student project and team feedback
vii. technology enabled and enhanced learning (TEEL)

Choosing interventions
The students were originally provided with a number of print-based resources to assist in self-paced learning to be used in a computer suite where theory and practice were delivered together. Following student feedback in this research project, a stronger technology focus (using IT to teach IT) was implemented with a ‘flipped’ teaching model and development of short audio-visual resources (vod-casts) to support this model. In addition the teachers’ responded to develop more online resources, student projects and team activities. Time to develop these resources was considered professional development, as the teachers felt they “could teach themselves” rather than rely on outside expertise. Teachers developed step-by-step audio visual resources to replace print based, flexible “bring your own device” with support to encouraged greater engagement and success.

Figure 8: Course completions – Certificate in Computing, level 3, 2011–2014



Average number students per annum: All students; 34; Under-25: 28

Resources from interventions

New student orientation starting with whakawhanaungatanga (building relationships) developed with learning advisors and manager support and timetabled over two weeks at beginning of the programme was created. This process was used to get to know each other, foster positive teacher – student and student – student relationships with familiarisation and goal-setting. Implementing these new activities and practices was highly successful and the learning was developed into a professional development activities and resources kit to share as a project outcome. Assessments were reshaped as part of the project implementation including using more formative quiz and peer assessment and team and group projects. A further effective intervention was to enhance student teams and group work and this process was also developed as a resource from the project.

Researcher feedback and analysis

Figure 3 shows the data in the pre-project period demonstrating that this programme had higher outcomes for Under-25 students than for all students in 2011. During the project, both Under-25 and all student groups showed improvements in completion rates.

Case Study 4: Certificate in Engineering, level 3:

The level 3 Certificate in Engineering is a NZQA unit standard-based full-year programme, taught by two staff who are members of a larger electrical and mechanical engineering team where programmes up to level 6 are delivered. Sixty students enrolled to complete this programme in 2013–2014, approximately 30 per year, and then transitioned to apprenticeships and industry. Many students reported previous negative learning experiences with low levels of achievement. The programme was selected for this project to develop a more comprehensive learning experience for Under-25 students and to improve levels of success and rates of completion.

Implemented professional development interventions:

i. facilitated whakawhanaungatanga
ii. inquiry-based learning
iii. increased industry and practice placements
iv. formal peer observations

v. talking teaching
vi. community of practice
vii. student feedback
viii. technology enabled and enhanced learning (TEEL).

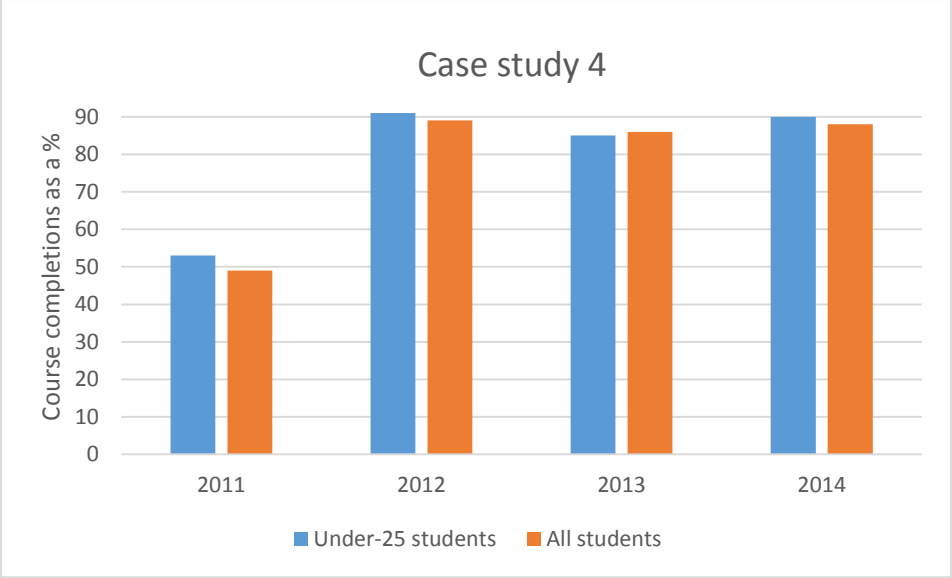
Choosing interventions
Previously, theory and practice were delivered separately with minimal access to technology to support learning and teaching. The student focus group interview feedback enabled the teaching team to select and engage in professional development activities and experiences that related to this student voice and profile. An example is the development of a whakawhanaungatanga model and process to get to know students. This case study provides an ideal example of implementing the Integrated Professional Development Model. Access and use of learning technologies was a key issues identified by students, and the teaching team (with management support) set out to improve student access to technology by designing and implementing a multimedia suite within the workshop to assist linking theory and practice. Both teachers then attended an entire formal taught course on TEEL, building audio visual resources and 3D models and setting up a Moodle course for students to access.

Resources from interventions
This case study contributed to the development of the whakawhanaungatanga resource and community of practice concept plan.

Researcher feedback and analysis
Throughout the two years of the project, careful attention to developing high trust relationships to work as conduits between the teaching team, learning facilitators and managers was important to fully optimise outcomes from student feedback and support the translation into responsive professional development. These relationships enabled students and stakeholders to assist the teaching team and their line manager's effect change. The teaching staff were highly motivated to develop their own skills to improve their learning and teaching resources to improve programme outcomes for their students. They actively engaged in a range of professional development activities including a community of practice to discuss and share inquiry-based learning approaches, teaching-focused team meetings, peer support/observation, reciprocal visits with other programme providers, and set up closer industry liaison for feedback and learning experiences for their students. The teachers also completed formal professional development in applying learning and teaching technologies.

In Figure 9, we can see that in 2011, all students in this programme had sub-optimal course completions yet the rate for Under-25 students was marginally higher. As the teaching teams began to engage with professional development, which introduced greater Under-25 focused innovation in their teaching and learning strategies and delivery, significant improvements were noted from 2012. A nearly 40% increase occurred in course completions (pre-project) and from 2013 to 2014 this improvement was sustained for both Under-25 and all students. The inference is that professional development initiatives which assist Under-25s are good for the whole cohort. In summary, for both case studies in this organisation, a well-resourced and targeted professional development with cultural, structural and political alignment led to a demonstrable improvement in student success in both these level 3 programmes.

Figure 9: Course completions – Certificate in Engineering, level 3, 2011–2014



Average number students per annum: All students: 30; Under-25: 25

Organisation 3

Case Study 5: National Certificate in Tourism, Māori, levels 3 and 4.
Case Study 6: Bachelor of Education, level 7

Both case studies in organisation 3 had much lower numbers of Under-25 students compared with the other eight case studies at 26% of the student cohort.

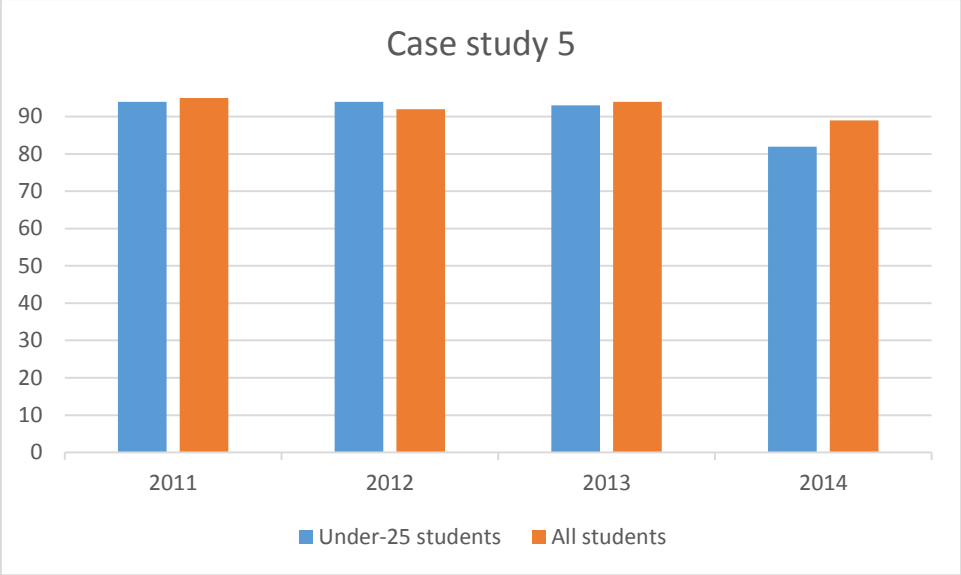
Case Study 5 was a programme delivered across the North Island with the majority of the students already working in the tourism industry. The completion rates of this particular programme were high compared to other programmes in the institution and remained so during the two-year project, yet were slightly reduced for Under-25 students. The 18-week programme was delivered through a contractual basis by the kaiako with expertise in the tourism industry. This delivery model provided challenges because professional development was not a stipulation of contracts for services. While the researcher and kaiako could discuss the potential opportunities to develop themselves professionally, no formal support was offered by the institution in this regard, apart from the opportunities offered through this particular research project.

The educational setting was not conventional in that the programme was delivered at the students' place of work, and classes were timetabled around the work schedules as required. What was unique was that the students could directly relate the learnings in the classroom with their occupations as tour guides and cultural performers.

Implemented professional development interventions:

i. facilitated whakawhanaungatanga
ii. formal peer observations
iii. talking teaching
iv. community of practice
v. student feedback.

Figure 10: Course completions – National Certificate in Tourism, Māori, levels 3 and 4, 2011-2014



Average number students per annum: All students: 518; Under-25: 134

Choosing interventions

The professional development initiatives for this particular cohort were difficult due to the spread of the programmes across the North Island. However, the research project provided greater opportunities for the kaiako to have critical conversations about their practice with the researcher. As a result, a small professional community of practice was established and provided a unique opportunity for the researcher and kaiako to share, reflect and learn from current practices. It also provided opportunities to introduce and discuss theoretical underpinnings through critical readings and case study investigations.

Resources from interventions

This case study contributed to the development of the whakawhanaungatanga and community of practice resources.

Researcher feedback and analysis

During the intervention year, an external requirement meant lengthy unplanned and unexpected administrative requirements, which reflected negatively on the overall course completion results and the teaching team. These issues have been resolved and recent developments have seen the kaiako now employed as staff. They are completing a compulsory tertiary teaching diploma as professional development to help them enact changes in practice to benefit students.

Case Study 6: Bachelor of Education, level 7

Case Study 6 was a level 7 three-year primary and early childhood education programme delivered by 20 staff. The cohort chosen for this particular case study was the 2013 Year 1 student group and six kaiako who teach within the programme. The programme includes teaching and learning theories, practicum, curriculum content, pedagogy and practice and critical theory.

All of the kaiako on the programme are trained and experienced teachers, and come with a wealth of pedagogical as well as content knowledge in their respective fields of expertise. All have Master's qualifications, one has a PhD, and two others are studying toward their doctorates.

This professional teaching qualification prepares students for early years and primary teaching. The three-year, full-time programme equips its graduates with teaching skills that will make a difference to all children, enhancing participation, achievement and the quality of the education they receive. It incorporates tikanga Māori, te reo Māori and Māori philosophy along with Western educational theories. A major in early years prepares graduates to teach in mainstream and Māori-medium schools, early childcare centres and primary schools.

Implemented professional development interventions:

i. facilitated whakawhanaungatanga
ii. formal peer observations
iii. talking teaching
iv. community of practice
v. student feedback.

Choosing interventions
Professional development for this particular group consisted mostly of conference presentations and occasional externally provided workshops and training. All kaiako were familiar with online teaching models and were trained internally to include online learning as a part of pedagogical practices. External professional development was seen by some as an indication of their current practice. There was a call for more internally driven professional development that utilised the knowledge and skills of the kaiako/teachers.

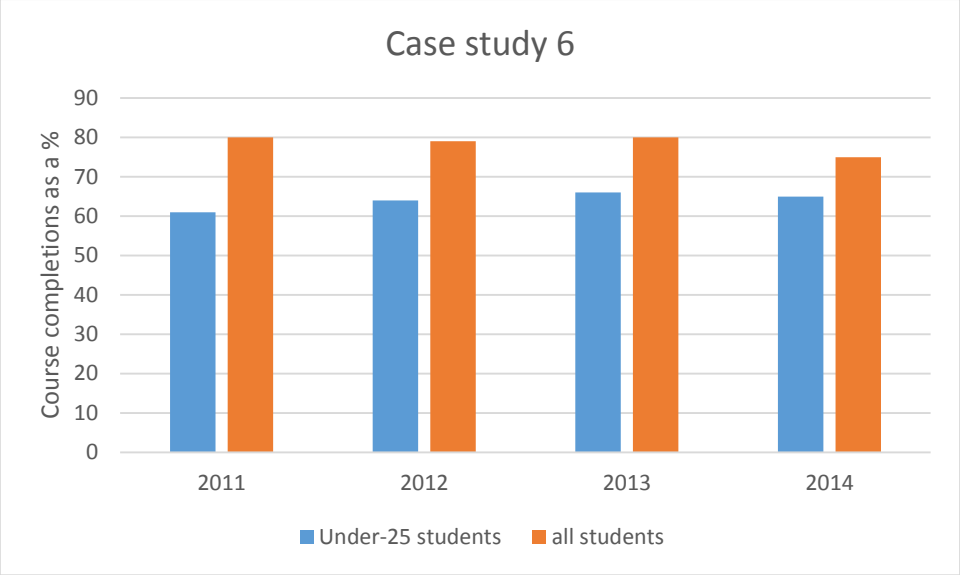
As a result, a professional community of practice approach was implemented as a part of the research project. This involved formalising existing practices of sharing and learning, as well as student-informed evaluations of current practices and classroom activities. The community of practice acknowledged the expertise of the kaiako both individually and collectively and promoted professional teaching and learning conversations that were reflexive and critical and co-constructed solutions that sought to achieve positive outcomes with Under-25 students. The student voice was also included in these conversations through summative evaluations at the end of teaching sessions and student interviews. This type of professional community of practice, therefore, attempted to include student and kaiako reflections and feedback and was seen to be more sustainable than external provisions of professional development.

Resources from interventions
This case study contributed to the development of the whakawhanaungatanga and community of practice resources.

Researcher feedback and analysis
The team met on a fortnightly or monthly basis to discuss new learning activities and student issues. Face-to-face meetings allowed the programme leader to talk about and share different aspects of their teaching practice, such as Māori pedagogy, how they could engage and build trust with their students and strategies for resolving teaching and learning issues.

Figure 11 below, shows a greater disparity in achievement between the Under-25s and the wider student body of this programme than for the other case studies. This disparity stayed relatively static over the four years presented (pre-project and project years). All student completions were slightly reduced in the professional development interventions year, 2014, but showed a small increase in the Under-25 student group.

Figure 11: Course completions – Bachelor of Education, level 7, 2011-2014



Average number students per annum: All students: 223; Under-25: 58

Organisation 4

Case Study 7: Certificate in Vocational Skills (Core), level 2
Case Study 8: Diploma and Bachelor of Teaching Early Childhood Education, level 7

The Certificate in Vocational Skills (Core) is a level 2 foundation programme delivered over one semester at a range of campus sites and locations. Students are predominantly Māori and many take advantage of Youth Guarantee to cover course fees and additional support.

Implemented professional development interventions:

i. facilitated whakawhanaungatanga
ii. formal classroom observations
iii. timing teacher talk
iv. critical reflective teaching practice
v. community of practice
vi. student feedback.

Choosing interventions
The programme had already been achieving improving successes with course completions for Under-25s, although pre-project this was around 60%. The aim of participating in this research project was to capture what these teachers were doing so that it might be replicated elsewhere. We also wanted to provide affirmation and support them to develop their own self-care strategies, as they operated in a fairly challenging space and often went above and beyond the call of duty to support their students to succeed.

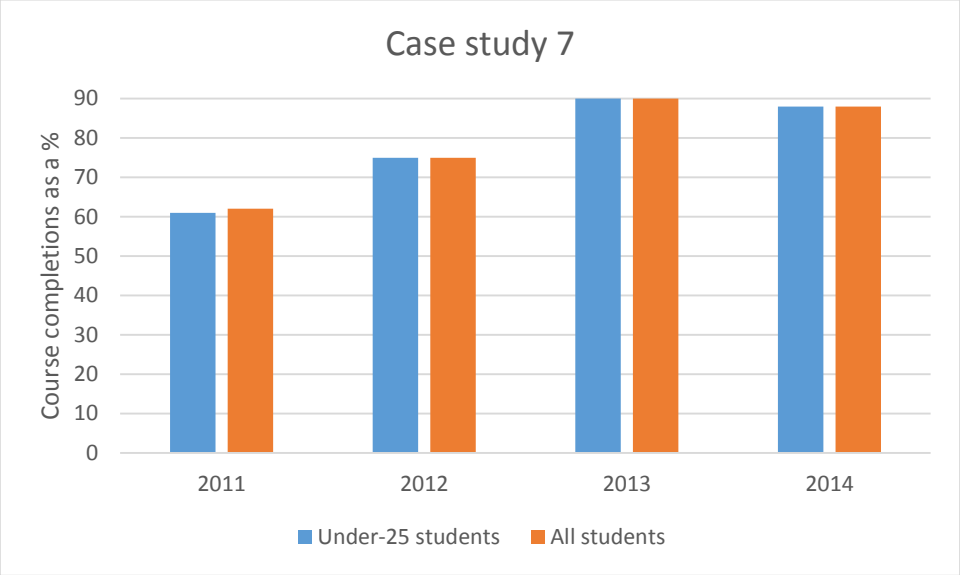
The experienced teachers utilised several strategies to get to know students well, beginning before enrolment and often including members of students' families/whānau or other support people. An emphasis on quality relationships and building a sense of trust was also seen by the teachers as pivotal in ensuring the right conditions were created for learning. The term 'parenting model' was often used by the teachers to describe the tough-love approach they liked to use.

Resources from interventions
Based on pre-intervention student feedback and the observation findings, the teachers came to their own conclusions about what strategies could be employed. The teaching observation resource and the formative teaching observation tool (timing teacher talk) was developed from this case study.

Researcher feedback and analysis
A number of learning and teaching strategies were observed in one classroom. This meant scaffolding students into more independent learning via increased group-work. In another class, the observations reinforced the value of the extensive emphasis on creating a strong sense of teamwork early on in the course delivery. The teacher in the first classroom felt that the group-work contributed to a greater sense of belonging and a supportive classroom environment. Group-work helped foster individual student strengths and contributed to a sense of pride when they felt they could help others. Students recognised and reported their increased self-esteem and confidence and acknowledged the benefits of being able to draw on the skills and knowledge of others in the group.

Both teachers involved displayed the characteristics of effective, self-reflective practice and welcomed support, ideas and suggestions. Feedback, both pre- and post-intervention, indicated how much the caring nature of these staff was valued by their students and admired by other stakeholders.

Figure 12: Course completions – Timing Teacher Talk: a Certificate in Vocational Skills (Core), level 2, 2011-2014



Average number students per annum: All students: 49; Under-25: 46

The course completion data pre-project shows that both Under-25 students and the student body as a whole were achieving at very similar completion rates. A gain of around 15% in course completions in the first year of the project (2013) was mostly sustained during the professional development intervention phase. This increased success could be attributed to the impact of being part of this study.

Case Study 8: Diploma and Bachelor of Teaching Early Childhood Education, level 7

Implemented professional development activities/interventions:

i. facilitated whakawhanaungatanga
ii. formal classroom observations

iii. professional conversations
iv. community of practice
v. student feedback.

The level 7 Diploma and Bachelor of Teaching Early Childhood Education was the focus of this case study. Five teachers, one learning advisor and one teaching Head of Department participated in the research project. Over the two years, 83 students enrolled; 58 were under 25, 58 identified as Māori and 9 identified as Pacific.

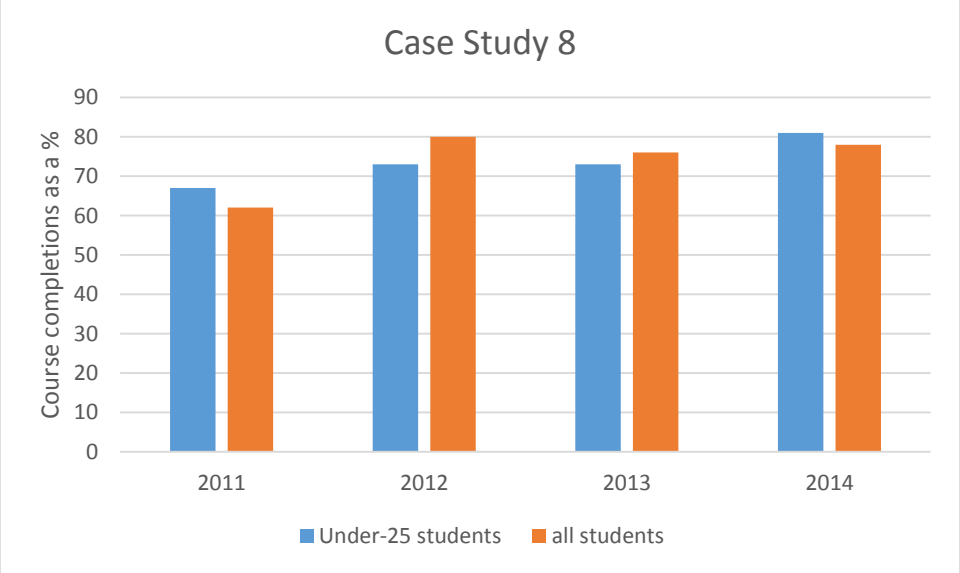
Choosing interventions

Teaching staff were interested in finding out what students had to say about their experience and what they considered needed to change based on delivery of a new degree programme in 2013. The research project and the willingness of the teaching team to take part was indicative of their commitment to this change project. All teachers in the project had completed formal teacher training and either had or were working towards Master's degrees. While they considered formal teacher education to have given them a positive grounding for their role supporting the Under-25s, they acknowledged that on-the-job contextualised professional development was probably the most useful to improve their practice. Professional development, for this team, was defined as any activity which teachers undertake that aims to improve the learning outcomes for students. This included learner-focused fortnightly team meetings, an active community of practice, listening and responding to student feedback, and mentoring. Another significant professional development activity involved formative observations where the learning advisor (the 'trusted third') completed observations for each teacher and at the same time gathered student feedback which focused on their perceptions of learning. The advisor then facilitated discussion and self-reflection with each teacher and supported the development of action plans, which were shared with students.

Resources from interventions

The three-way teaching feedback resource and accompanying video was developed as a professional development resource from the project due to the highly successful implementation and positive change reported by participants.

Figure 13: Course completions – Diploma and Bachelor of Teaching Early Childhood Education, level 7, 2011-2014



Average number students per annum: All students: 54; Under-25: 32

Researcher feedback and analysis
In Figure 13, the data indicates that in 2011 the completion rate was greater for Under-25 students than the wider student cohort. The following two years saw an increase in completions for both Under-25 and all students with a slightly lower success rate for the Under-25s when compared to the whole group. By 2014, after the professional development project intervention, the overall success rate had moved to 77.5% for all students and the Under-25 to 80.5%. This increase certainly suggests improved practices led to greater success for Under-25s. In addition to this improved data, this team now works together as a collaborative and supportive team to constantly and tenaciously examine their practice within a community of practice at all times.

Organisation 5

Case Study 9: Certificate in Building, level 4
Case Study 10: Certificate in Electrical Engineering, level 2
Case study 9 was selected for the high percentage of Māori (63%) students as well as students under the age of 25. At the time of the study the Centre for Trades (CT) in this organisation was going through a large, institution-led learning and teaching change project. The CT project focused on modernising the teaching practice to be student-centric and on moving to a project-based delivery model.

Implemented professional development interventions across these two case studies were:

i. project-based learning activities
ii. industry focus and external visits
iii. peer observations
iv. talking teaching
v. community of practice
vi. student feedback.

Choosing interventions
There were many opportunities, both formal and informal, for the teachers to engage in professional development. The key focus was practical work based projects. These projects were developed with peers and industry leading to changes to curricular and assessment requirements to increase student engagement and success. Visits with industry were enhanced, tracked and further students' placements were established. A second strategy was bringing experts into classrooms and workshops. Returning to the workplace with students helped staff to connect with employers and students in a realistic environment. It also facilitated teaching staff keeping up to date with the realities of the workplace to further support their teaching.

Resources from interventions
A key point of change for the teachers occurred when the feedback from the student interviews informed their professional development decision-making and choices alongside the expectation to move to more project-based practice. This institutional project led to two successful resources: a Project-based learning concept plan and a leadership rubric tool to support effective teaching analysis.

Figure 14: Course completions – Certificate in Building, level 4, 2011–2014

Average number students per annum: All students: 87; Under-25: 72

Researcher feedback and analysis

While the results for Under-25 students in Figure 14 showed a slight increase in Under-25 student completions from 2011 to 2012, this position reversed in 2013 with a corresponding reduction in all student completion success in 2013 and a further reduction in both groups in 2014. Similarly, Figure 15, shows a marked decrease in Under-25 student completion in 2011 compared with all students (25%). This completion gap was reduced in 2012. For Under-25 this increased completion was sustained in 2013, though reduced for all students both at 80% completions.

The intervention year, 2014, showed a reduction in Under-25 success of over 10% with an increase in all student completions to close to 90% noted.

Figure 15: Course completions – Certificate in Electrical Engineering, level 2, 2011–2014

Average number students per annum: All students: 66; Under-25: 56

Whilst these results are variable and challenging, they do not tell the whole story of the overall impact of these planned and managed change projects and their influence over professional development decision-making. What Figure 10 appears to indicate is such change is more noticeably detrimental to Under-25 students, yet in Figure 9 both groups were negatively influenced equally. The Centre for Trades' whole organisational change project affected many aspects of the programme development and delivery and required a complete model of change. Enacting such a model required structural, political and cultural interventions and resourcing. Feedback from the qualitative data collected from these two case studies attested to the value seen by all stakeholders of this important shift in learning and teaching approaches, yet cautions that it is important to carefully monitor and resource during the enacting of such change, as summarised in the findings in the body of this report.

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