

**Tertiary Education
Commission**

Te Amorangi Mātauranga Matua



‘Transition to Tertiary Life’ event

**Entering and re-entering
tertiary education in New Zealand**

Prediscovery report – June 2018

Published by the Tertiary Education Commission

Te Amorangi Mātauranga Matua

National Office

44 The Terrace

PO Box 27048

Wellington, New Zealand

Publication Date: June, 2018

ISBN 978-0-478-32097-8 (electronic)

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Forewords

The Tertiary Education Commission (TEC) invests over \$3 billion in tertiary education and supporting the tertiary and career system. It gives us a significant stake in exploring what government agencies can do to support our stakeholders in the years to come.

Challenges and opportunities to entering tertiary education

Unlike, say, our financial or health records, there is no historical record of lifelong learning. It makes it tricky to pinpoint how and when New Zealanders prepare for and enter tertiary study. We set out to explore this question: “How do we decide and prepare for study?”

This report describes the findings of a four-week sprint we called a ‘Transition to Tertiary Life Event’. It involved working with multiple government agencies, 55 students and various subject-matter experts.

Three common threads uncovered

We found three common areas that keep people from and/or encourage people to fully take part in tertiary education.

- › People who have influence over the daily life of the student.
- › Timing and access to information.
- › The processes tertiary institutions impose on potential students.

Our aim is to integrate tertiary education across education, skills and the workforce by providing people-centred products and services

Over the next three years, our aim is to develop world-class information and communication products and services partnering with other government agencies and institutions.

Answering the question ‘How do we decide and prepare for study?’ will help us pinpoint where best our information and product interventions provide the most benefit.

We’ve already started this journey with the Ministry of Education, New Zealand Qualifications Authority (NZQA), and the Department of Internal Affairs. To streamline student application and enrolment the University of Auckland and Skills New Zealand are testing a new online service using RealMe® – a digital first for New Zealand.

Another challenge we’re working on is reaching tertiary parity for Māori and Pasifika people on par with other New Zealanders. One in every five New Zealanders, approximately one million people, have Māori or Pasifika heritage. Our goal is to achieve parity within five years, in both participation and completion rates.

We support a strong education system that ensures a resilient workforce

Tertiary education in all its forms no doubt enhances the prosperity and wellbeing of all New Zealanders. What we want to do is provide the right information and options for all New Zealanders who want to enter tertiary study – i.e., secondary to tertiary students; people not currently in education, employment or training (NEET); and people already in the workforce.

New Zealand needs the skills and the workforce to achieve positive outcomes in all areas: social mobility; wealth; resilience; equality; labour market flexibility; and productivity. We can do this through tertiary education and by supporting the tertiary and career system, and by building strong connections between education and employment.

Brendan Kelly

Deputy Chief Executive / Chief Information Officer
Tertiary Education Commission

The Service Innovation Lab aims to make it easier for people and businesses to access government services. The ‘Transition to Tertiary Life’ event gave us and agency partners an opportunity to explore what a prospective student and their supporters need to navigate decisions around tertiary study.

Using this approach showed the journey from a prospective students’ point of view. This report documents the process, what we found, and what we can explore further.

We can map out a number of scenarios: early exploration; decision-making; entering and re-entering tertiary institutions; completing studies and other exit paths; study changes; and leaving tertiary studies before completion.

It highlights areas where improvement is possible not just from one agency but multiple agencies and sectors. It helps us look at the consumer’s needs rather than individual agency interventions, transaction, products, or views.

We went as broad as possible to take a critical look at the whole journey. We explored opportunities that best support a person in their journey. For instance, some services and needs might need to merge, be created or even made invisible.

In a very short space of time the team crafted a range of strategic opportunities. Years of accumulated knowledge shared by the sector, the students (past, present and future), and supporters gave us the means to:

- › Analyse and validate research about people’s needs, customer journey mapping, and pain points from multiple point of views.
- › Understand the problem, know who is doing what, and where opportunities lie for service delivery and improvements.
- › Test assumptions with students and their supporters.
- › Identify reusable technical components that are relevant to the life event.
- › Identify ways to help people make better choices for education which will lead to better completion rates, less debt accumulated, etc.
- › Identify the potential roles of different service providers in the ecosystem.

It confirmed to us that bringing people together to work on shared areas of interest is an effective way to look at how service and products hinder or aid tertiary choices and participation. These are complex and intricate systems that require the co-design and co-delivery of services and products that serve the student from beginning to end.

Pia Andrews (nee Waugh)
Service Integration Lead
Service Innovation Lab

Executive summary: Tertiary education as a life event

This report serves to increase understanding of the tertiary education landscape from a people-centred design perspective. The findings in this report have multiple purposes including to:

- › feed into the Tertiary Education Commission’s (TEC) Careers System Strategy currently under development
- › feed into the refresh of the Tertiary Education Strategy (TES) due to be updated for 2020
- › inform existing and future operating policy and strategy for the TEC in regards to investment and delivery in tertiary education
- › help us be able to provide meaningful careers advisory services for New Zealanders.

Based on the premise that learning is a meandering life-long pathway that lasts a lifetime we wanted to understand what information and services users value.

We led what we call a prediscovery with the Service Innovation Lab to explore what it looks like when someone enters the tertiary education system. We focused on consumer needs, the landscape of services and service providers, and identified specific opportunities or new services that could be designed and developed.

As a starting point, we found seven opportunities based around four themes to use. We hope this information will help inform your own understanding of what information and services consumers value.

Our (TEC’s¹) work in this space supports the Department of Internal Affairs (DIA) Service Innovation work programme. The aim is to apply an outside-in ‘joined up’ view of government services and develop resources and information that is designed around people.

Methods of data collection – existing research, interviews and focus groups

Our approach included a meta-analysis of existing research and documentation related to entering tertiary education as a life event, as well as several qualitative interviews and focus groups with stakeholders. To understand the end-to-end student experience and the ecosystem they navigate, the team:

- › reviewed 94 pieces of research and documentation
- › met with subject matter experts from across the tertiary education landscape
- › interviewed and conducted focus groups with key stakeholders to understand consumer needs and journeys:
 - students (prospective, current and recently graduated) at different stages in their lives (school leavers, mature students, recidivist students, international students)
 - family members of students
 - tertiary education providers.

¹ The Tertiary Education Commission and Careers New Zealand merged in July 2017, so where TEC is mentioned, note that this also includes expertise from the former Careers New Zealand.

A total of 55 students and subject matter experts contributed.

A good place to start – four major themes and seven opportunities

One of the key deliverables was defining evidence-based opportunities that can be explored in more depth in future design work. The team identified seven opportunities related to four major themes that could add value for both students and stakeholders. It's a good starting point for agencies and key stakeholders to develop further.

We looked at opportunities where things could be done differently. How do we change the current incentives in the tertiary education and careers system? How can we transform the way we manage the system? Particularly, as a (artificially) linear progression into something more akin to an episodic set of connected and disparate engagements in formal learning and experiential self-knowledge over the course of a lifetime?

Theme 1: “What do I need to know and understand to help me make the best choice for now and for my future?”

- › This relates to the issues students and their supporters (family, peers, teachers etc) have with planning and making choices. Both in the context of their lives in the present and also aligned to their aspirations for the future.
 - **Opportunity 1:** Increase the relevance of information. It needs to fit with students' lives, aspirations and personalities so their choices align with their desired outcome.
 - **Opportunity 2:** Coherent and actionable information that clearly shows how different study options effect life outcomes for students and their supporters.

Theme 2: “What and when do I need to share information about myself and what I want to do with others?”

- › This relates to the need to provide the right information to the right places at the right times and the challenges associated with this.
 - **Opportunity 1:** Increase efficiency and lessen unnecessary effort by only asking for information if it cannot be obtained from existing authoritative sources.
 - **Opportunity 2:** Provide timely and actionable information about key choices and events to create certainty for students and their supporters and avoid missed opportunities.

Theme 3: “Change is normal, and should be easy.”

- › This relates to the typical experience of changes in life and circumstances. Changing a course of study is highly likely, often for first-time students and those transitioning from secondary school to tertiary education. Despite changing a course of study being a common occurrence, it often results in significant personal and financial consequences for the student.
 - **Opportunity 1:** Recognise that change of study is normal and natural, particularly for first-time students going direct into tertiary study from secondary school. Supporting and assisting students through these changes leads to better outcomes.

Theme 4: “Feeling included and supported is key to better outcomes.”

- › This relates to students who feel included and supported. They typically achieve better outcomes during study and post study (e.g employment).

- **Opportunity 1:** Raise and recognise students feelings of connectedness, acceptance, safety, and recognition of their abilities. Students who feel connected and supported typically achieve better outcomes.
- **Opportunity 2:** Ensure there are teaching styles and mediums available to help students and their supporters make the best study choices. Choosing the learning experience that suits their situation helps students realise their potential.

What's next? – Using the information to develop strategies, inform policy, and improve processes

Senior leaders within the tertiary education ecosystem will be the main drivers to support these opportunities and advance the design work.

The TEC will use the findings to develop new strategies and inform operational policy

These findings will further inform both the Careers System Strategy currently under development, as well as feed into the refresh of the Tertiary Education Strategy which will be updated for 2020. In the meantime, it informs existing and future operating policy and strategy for the TEC. This relates to investing in tertiary education delivery in New Zealand as well as providing meaningful careers advisory services for New Zealanders.

The Ministry of Education (MoE) and Service Innovation Lab will incorporate the findings in current work programmes

MoE's massive work programme currently underway offers a number of opportunities to address partially or wholly some of the opportunities identified. There is an expectation that third parties will become involved, even innovatively lead out with the development of integrating services such as data sets and APIs.

From a Service Innovation Lab's perspective the information found will inform future discoveries with other life events, both from a process and knowledge perspective. We now have an understanding of the broad picture of entering the tertiary space, who is doing what, and where opportunities lie for service delivery and improvements for students and stakeholders.

Leverage existing data to improve the processes prospective students access

The team found clear pain points for prospective students exploring going into tertiary education. This validates our efforts to improve the enrolment experience and process. For example, there is an abundance of useful data in the New Zealand administrative system. If harnessed, it could be reused to improve the enrolment process for all concerned – students, their supporters, tertiary education providers and other support organisations.

With consent, existing data about a prospective student could be electronically collated and inserted into the enrolment process, reducing the need for students to present signed paper-based documentation in person. In addition, the information collated as part of the enrolment could be used to feed into other related and downstream government processes. It will provide easy access to other public services and entitlements e.g., fees free entitlements, scholarships, student loans and allowances, electoral roll enrolment etc.

An exploration: Entering tertiary education

During November and December 2017, the TEC led a collaborative discovery with the Service Innovation Lab focused on exploring ‘Entering Tertiary Education’ as a life event.

Entering tertiary education includes re-entering tertiary education because of its episodic nature. There is no way to gain a holistic view or understanding of the level of education, experience, or self-knowledge that develops over a lifetime. Tertiary education is not captured and presented in the same way a lifetime medical record is. Unlike the tertiary education system, health professionals can intervene based on the record of an individual’s health status and interactions with the health system (at primary, secondary and tertiary levels).

Tertiary education in New Zealand is a team effort across several agencies

This work is part of the Department of Internal Affairs (DIA) Service Innovation work programme with one of its goals to apply an outside-in ‘joined up’ view of government services.

No single agency actually ‘owns’ tertiary education. At a transactional level, tertiary education occurs between an individual and one or more tertiary education providers, which may or may not be crown owned. In fact, the highest volume of tertiary education providers are privately owned and operated.

Given a proportion of tax-payer money funds the bulk of tertiary education providers, which is distributed by us, we led this prediscovery. However, tertiary education in New Zealand is a team-effort across several agencies. Many agencies contributed to the findings in this paper, specifically subject matter expertise from:

- › Ministry of Education
- › Ministry of Social Development
- › Inland Revenue
- › Service Innovation Lab
- › Department of Internal Affairs

Out of scope was the unseen parts of the tertiary education pathway that leads to developing capability that sits outside of the tertiary education system. For example, through self-knowledge, experience and professional development. How we understand this landscape in all dimensions, not just through the assessment and award lens, is still open for exploration.

Understanding what characterises the tertiary education and careers system

Learning is lifelong, a meandering pathway for all. Learning is not *preparation* for life; it occurs *throughout* a lifetime. We do not think of taking young people away for some years and educating them before they begin their work life in the real world. Education is about providing people with the capacity to respond to change, and change is now too frequent for learning to be other than continual. It cannot be packaged and delivered separately from experience².

² Gary Hawke, Emeritus Professor, IPS Lecture Series; New Zealand Future Maker or Future Taker - Aligning Education with our Contemporary Society and Economy, September 2008.

With the idea of Learning for Life in mind, we wanted to understand and identify through evidence certain characteristics about the tertiary education and careers system.

TEC wanted to:

- › Better understand the re-entering/entering and enrolling in tertiary education from beginning to end, including the pre/during/post interventions that help students make the best study choices and lead to the best life outcomes.
- › Identify opportunities to improve the student experience leading up to the actual enrolment transaction. This includes the enrolment transaction and any secondary processes and services that might benefit from an improved customer experience.

Service Innovation Lab wanted to:

- › Understand the broad life event from the perspectives of students, agencies and supporting organisations and identify where opportunities lie for improved service delivery and a better experience for customers.
- › Continue to identify reusable components that are relevant to re-entering/entering tertiary, related secondary processes, where government services meet the individual.
- › Identify potential service opportunities to take through to a minimum viable product with us and other partners.

Exploring opportunities to improve tertiary study from a customer journey perspective

Our vision is that prospective students enrol in the right learning, in the right place, at the right time, at the right level for the best potential outcome.

Over four weeks a multidisciplinary team from our organisation, the Service Innovation Lab, and experts from other agencies explored the re/entering tertiary education from a customer's journey perspective.

We looked at the lead up to the enrolment transaction from wherever you are in the journey of life.

One of the key deliverables was to define a range of evidence-based opportunities that could be explored in more depth in future design work. The team engaged with customers and key stakeholders, reviewed a swag of documents and research, held discussions with subject matter experts, and after synthesising and distilling all of the information, identified a number of opportunities.

It's a starting point for what information and services could be investigated and developed further. We now have a cache of seven opportunities with identified value for both students and stakeholders to work with.

This report also describes what the team learnt over the course of the four-week pre-discovery sessions including:

- › the definition of major themes and related opportunities
- › an assessment of the discovery process
- › what's next for the entering tertiary life event.

The transition to tertiary life event: a big decision tens of thousands make every year

Every year, tens of thousands of people enter tertiary education. Deciding to do so not only affects the learner, it affects their whole support system – family, friends, and mentors to name a few. Making use of the opportunities to improve this important life event will make this decision easier. It will ease the transition and make the outcomes clearer, simpler, and easier on the whole support.

In 2016, 415,870 students took part in tertiary education

How many are studying?

The following numbers are students taking part in typical academic-style studying. It excludes learners in an apprenticeship style (learn-as-you-earn) pathway e.g., industry training.

‘Entering Tertiary’ is a life event that affects domestic students and international students. The total number of tertiary students enrolled in New Zealand peaked in 2005 at 499,725. It has shown a steady decline ever since³.

In 2016, there were 67,090 students in New Zealand began tertiary education, and a combined total of 415,870 students taking part⁴.

Of the 415,870 students enrolled in 2016; 353,300 were domestic students and 62,570 were international⁵.

International education is New Zealand’s fourth largest export earner, contributing \$4.5 billion dollars to the New Zealand economy⁶.

What we don’t know is where these students come from i.e., school, unemployment, benefit, work etc. nor what pathways they took into tertiary.

Where they are studying?

New Zealand has many tertiary providers to choose from. Of the total number studying in 2016⁷ (not including industry training or community education)⁸;

- › 173,880 studied at eight universities
- › 145,635 studied at 12 institutes of technology or polytechnics.
- › 40,035 at Wānanga (of which there are three)

³ Provider-based Enrolments (2017), Education Counts, <https://www.educationcounts.govt.nz/statistics/tertiary-education/participation>

⁴ ibid

⁵ Ibid

⁶ Education New Zealand <https://www.enz.govt.nz/>

⁷ Students are counted in each sub-sector and qualification type/level they enrol in, so the sum may not add to the total

⁸ Provider-based Enrolments (2017), Education Counts, <https://www.educationcounts.govt.nz/statistics/tertiary-education/participation>

- › 68,730 at private training establishments (of which there are over 300).

Full-time vs part-time

New Zealand has relatively high levels of part-time study with 164,755 students studying part-time and 251,120 people studying full-time (though 71,480 of these full-time students were studying for less than a full year)⁹. In fact, New Zealand has some of the highest rates of part-time study in the OECD¹⁰.

How they identify

There are considerably more females in tertiary study than males; with 232,675 females and 183,195 males in tertiary study in 2016¹¹.

In 2016 there were 224,695 students from a European ethnic background, 82,370 Māori, 36,510 Pasifika, 95,550 Asian and 22,725 students of other ethnicities¹². When considering these figures, it is important to keep in mind that people can and do identify as more than one ethnicity.

Completing a qualification

The completion rates for universities are 81%, significantly higher than for industry training organisations with 72%. For Pasifika students these numbers are much lower than the average with 55% and 62% of Pasifika students ending their tertiary experience with a qualification¹³.

The representation of Pasifika students also varies between tertiary providers. Universities are 7%, ITPs 10%, Wānanga 10%, PTEs 17% and ITOs 7%¹⁴.

Would they do it all again?

Of those who have engaged in tertiary education in New Zealand, 75% would change what they had studied if they could do it all again¹⁵. This is consistent with the feedback we had from the students we spoke to, the clear majority of whom had changed or were planning to change their qualification study major/tertiary provider.

The image below summarises the numbers above – this is the landscape in New Zealand tertiary education.

⁹ Provider-based Enrolments (2017), Education Counts, <https://www.educationcounts.govt.nz/statistics/tertiary-education/participation>

¹⁰ David J. Scott, **A closer look at completion in higher education in New Zealand**, 2009. <http://www.tandfonline.com/doi/full/10.1080/13600800902825819>

¹¹ Provider-based Enrolments (2017), Education Counts, <https://www.educationcounts.govt.nz/statistics/tertiary-education/participation>

¹² ibid

¹³ Pacific learner success in workplace settings (2016) Dr Debbie Ryan, Lisa Kitone and Racheal Fleming

¹⁴ Ibid

¹⁵ Student Pathways, Inland Revenue, 2017.

Tertiary education in 2016 at a glance

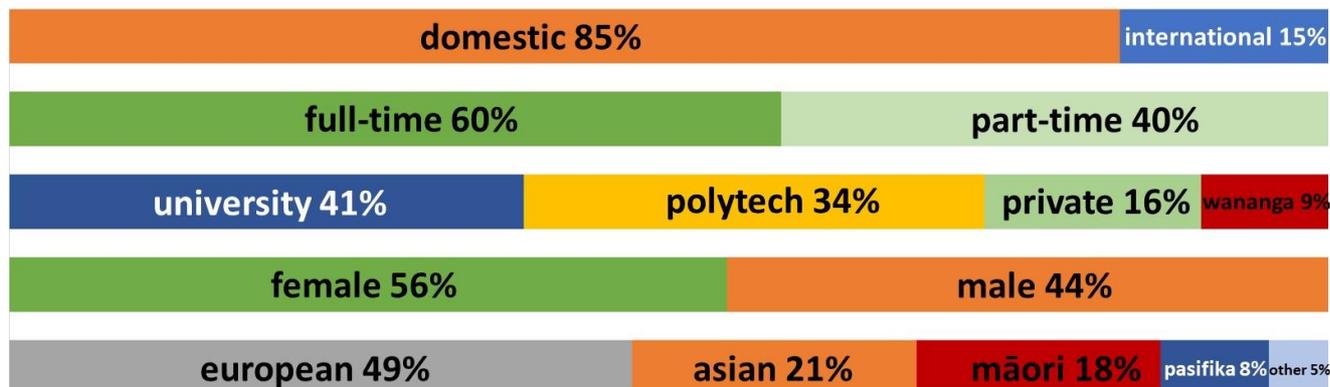


Figure 1: Tertiary education landscape 2016

Note: For further information about how New Zealand fares alongside other OECD countries, please see https://read.oecd-ilibrary.org/education/education-at-a-glance-2017/indicator-a3-who-is-expected-to-graduate-from-tertiary-education_eag-2017-9-en#page13

Please note that the OECD indicators are different to the breakdown above because some are specific to New Zealand, while others are not quantified in the OECD report.

Determining scope

This is a very broad life event and the experience looks and feels different for each person who goes through it. We decided to use the following vision statement:

“That prospective students enrol in the right learning in the right place, at the right time, at the right level, for the best potential outcome”

The best potential outcome means making a genuine step-change in their life chances. So, the enrolment transaction itself becomes the proxy for the optimal choice made. It’s the culmination of everything that has led up to the enrolment transaction – deciding and preparing for tertiary study – from where-ever you are in your journey of life.

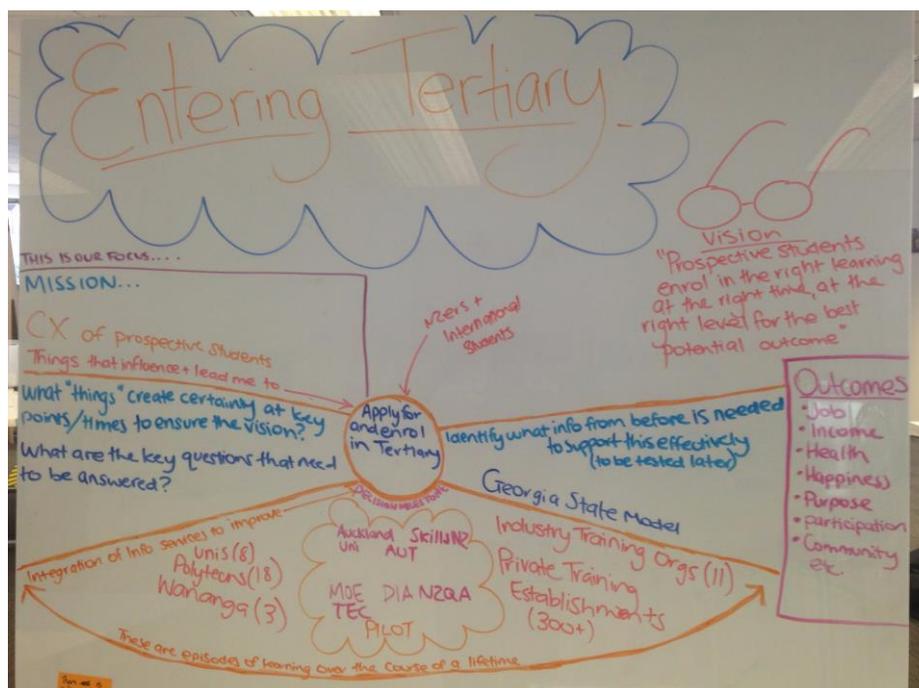


Figure 2: Vision context sketch

With this vision in mind we had to figure out how to narrow the scope in a way that would let us come out with something meaningful in four weeks. We used many different methods and focused on the events leading up to enrolment – what things could influence students to the point of enrolment that would improve their experience? What opportunities might there be for integrating information and services that could lead to an improved enrolment experience and subsequent later outcomes for students?

Approach

The team took a combined approach including a meta-analysis of existing research and documentation related to this life event, as well as several qualitative interviews and focus groups with stakeholders. To understand the end-to-end student experience and the ecosystem they navigate, the team:

- › reviewed 94 pieces of relevant research and documentation (both empirical and anecdotal)
- › met with subject matter experts
- › interviewed and conducted focus groups with key stakeholders, including:
 - a range of students (prospective, current and recently graduated) at different stages in their lives (school leavers, mature students, recidivist students)
 - family members of students
 - tertiary providers.

A total 55 students and subject matter experts contributed to this discovery. Please see Appendix 3 – Interviews and workshops for a description of the participant demographics.

What we learned

Who engages in tertiary study? Why? How do they engage? What inspires them to study? And how do they decide? What influences their decision? What does this pathway look like?

Who engages in tertiary education?

Groups

We identified the following customer groups for the re/entering tertiary life event:

- › secondary school students to thinking of study
- › people moving to New Zealand to study
- › people re-entering tertiary after a break
- › people who have left school but are not in current work or study
- › people sponsored by work to study
- › social welfare beneficiaries who are shifting to tertiary education
- › industry internships
- › mature students
- › people moving to New Zealand with a family member who cannot or will not seek employment due to visa requirements or circumstance

How do they enter tertiary study?

There are different pathways into tertiary education – with the traditional “academic” pathway the best understood and well-travelled. We know there are other pathways but these are less obvious and understood across the system. These include non-traditional learners (i.e. first in family to access tertiary education) and non-traditional motivators (i.e. opportunities to re/up-skill people already in the workforce to respond to the changing nature of work.) This is not an area that was explored in-depth during this work, and it has been noted as a limitation and would need to be looked at in more depth with any of the opportunities to be explored further.

Why study?

People have a range of motivations for studying:

- › future employment and increased income potential
- › future lifestyle
- › cost and ease of the course of study
- › intrinsic learning
- › impact on family and relationships
- › income and lifestyle during the course.

The goal they are trying to achieve is to make the best choices for their situation and aspirations throughout their life.

What we discovered from workshops and interviews

Workshop attendees

Our first workshop focused on potential students' expectations of where they saw themselves 3-5 years after leaving school, and what options they thought about rather than what they would study.

The workshop showed participants had a wide range of views on where they thought they might like to be, both in terms of work/study and geographic location.

A further workshop focused on students who were currently studying or has just finished, to find out how their study matched their expectations and aspirations. The results from this workshop showed that most participants did not get close to being where they thought they would be. Their decisions and choices changed as they learned from their experiences, particularly study choices, but, more so, as they learned more about themselves.

Changing choices

This is a typical and natural phenomenon for young people who are still learning about themselves and the new world they are learning to navigate. Unfortunately, the world is not structured to allow for them to learn and grow in this way. The world assumes a linear path through education and employment/career. Their experience, and even the path of our team members, shows our paths are very organic as we learn more about ourselves, the world around us and our place in it.

Responding to changes

We did not gain significant insights into how well tertiary providers/programmes cater for a change in expectations as learners' educational experiences unfold. In some instances (e.g. universities), the qualifications are broad with cross-credits being a feature and so learners can rejig their programmes of learning as they go. However, one interviewee noted that the tertiary education provider (an ITP) she was studying with was very responsive to modifying curriculum design based on student feedback. This would have to be examined further and more intentionally to understand if this is a one-off/a feature of this one TEO, or a real phenomenon across the board.

Who and what influences study decisions?

Prospective students are influenced by a wide range of people and experiences. The opinions of the people around the student appear to hone the nuances of the decision to study – the where, when and how. In terms of what to study, the quality of the advice and guidance given can have a profound effect on someone choosing a course and career.

Influencers we found included:

- › people
- › media
- › location
- › personal life stage.

People

There is a wide range of people who influence the decision to study:

- › Family – parents, caregivers, siblings, grandparents, family friends, extended family, spouse/partner, and children.

- › Social – friends
- › Employment – peers, workmates, employers
- › Education – teachers, career advisers, counsellors, tertiary providers, study funders (e.g. scholarships)
- › Community – cultural influences, iwi, religious groups, local community groups
- › Social capital.

While the students we interviewed listened to a wide range of people, there was no evidence to suggest that any specific group had the most influence. We did find that a prospective student's background and existing levels of confidence and capability have a large impact on who they engage with and how they react to advice they receive. For example, they all drew on their social capital and this had a material effect.

Most influencers both formal/informal are typically low in capability and competence when it comes to giving career advice. Many influencers lack an up-to-date understanding of the careers and courses landscape. There are a lot of resources available but it is a complex area to navigate. There is so much information available that it is often hard to know where to begin, or even know what is correct due to conflicting messages.

Employers have found that they struggle to get their voice heard over other influencers closer to the student.

Social capital relates to the expert sources of information available to potential learners. This wasn't specifically identified by any of the students over and above what has been previously stated. We know this is a particular problem for first in family learners who cannot access the benefit of experience from family/whānau. This needs further exploration and is a limitation of this work.

Media

The media also influenced students' decision-making. The students we spoke to listed what they saw on YouTube as an influence when deciding what to study. Other students mentioned that their understanding of what a profession entailed came from the way it was portrayed on television and in films. It was surprising for the team to hear that (particularly among younger students) YouTube and video content was so influential.

Students also mentioned advertising as another way the media influenced their study choices.

In terms of digesting the information about what, when, where and how to study, visual/graphical information was the preferred presentation mode over large amounts of text.

Location

Location also influences how people make decisions about where and what to study. This was a feature of the Pasifika demographic as well as more generally. Many students in general won't travel more than 50km for study. It appears to be a psychological barrier for many. The students that travel seem to do better, although this is a correlation rather than causation e.g this could be a socio-economic effect. Students with more social and economic capital could be more likely to travel (and have previously enjoyed educational success).

Those who choose not to leave their current home often choose courses from those available rather than what they really want to do or can do, because those courses are not locally available. "Stay at home" students may choose courses available face-to-face and locally because they could be the most comfortable with that mode of learning rather than distance education, or because they are unaware of that option.

It appears that the tertiary system is designed primarily around metropolitan areas. The more specialist courses and qualifications are only taught in one or two locations, which means they are only accessible to those who are prepared to travel, and have the means to travel.

Personal life stage

There are a range of life stages that people must pass through on their way to becoming an adult – it’s integral to human development theory. The life stage you are in plays a role in determining how you make decisions and choices.

There are many human development frameworks we could use to explain this. The one we used during this prediscovery is outlined in Table 1 and takes a leadership, employment and relationship perspective.

Each life stage is matched with the corresponding age, study year, relationship characteristics and employment status¹⁶:

Table 1: Life stage framework

Development stage	Age	Study year	Relationships	Employment
Egocentric child <i>For the fulfilment of the needs of the self</i>	5 - 15	Years 1 to approx. 9	Living at home with a caregiver	Not applicable
Social reactive <i>For the fulfilment of others</i>	16 - 24	Final years of secondary school and early tertiary if transitioning straight from school	Transitioning from living at home, independence, first committed relationship (<i>i.e. share life and assets</i>), first child/ren	Unemployed post-secondary, first job post-secondary,
Vision and creation <i>Develop self for future opportunities for self-fulfilment and for the care of others</i>	25 +	Postgraduate, mature students, industry training etc.	Independent	First managerial position, first leadership position.

Based on this framework, for any person seeking a career, there's a common journey that people go through that occurs over three overlapping sequential steps:

- › Inspiration “knowing I’m valuable”
- › Direction “my interests” and “my purpose”
- › Capability “knowing I can be valuable”.

¹⁶ Anderson, B. The Spirit of Leadership. White Paper, theleadershipcircle.com, 1995.
Kegan, R. In Over Our Heads. Harvard University Press, 1994
Hall, B. Values Shift. Twin Lights Pub., 1995.

Research findings

We completed a meta-analysis of empirical research, documented anecdotal experience and combined this with what we learned through the workshops and interviews.

Qualitative findings

For the younger students we interviewed, steps 1 and 2 were clearly described whereas mature students already had an awareness of their capability and how that could be applied post study.

For school leavers their life stage can be summed up by the phrase *'youthful decisions, adult consequences'*¹⁷ and these consequences can manifest themselves in many ways over a long period of time.

Examples include:

- › High churn rate of courses – most people change courses from what they initially chose or worse drop out without completing.
- › Ongoing poor productivity associated with tertiary education as noted by the 2017 Productivity Commission report¹⁸.
- › Inland Revenue research has identified that people who had a poor experience with tertiary education are less likely to repay their student loans especially when they are overseas and must self-manage their loan repayments.

Quantitative evidence

Poor study choices cause issues for the individual and their supporters and comes at a cost for New Zealand. The 2017 Productivity Commission *New Models for Tertiary Education*¹⁹ provides some detail about the cost to New Zealand in terms of lost productivity, although not all can be attributed to skills. The exact cost is not immediately clear, but the following numbers give an idea of some financial costs.

Since 2004 TEC has invested \$700m in students who started a degree (at level 7 [first year of university] with three years of study) who studied and likely passed but did not complete a degree. The value of delivery of these qualifications was approximately \$11b. This is comprised of approximately \$9b completed qualifications and approximately \$2b of uncompleted qualifications, which includes those who are still studying. Without more in-depth analysis we cannot identify the proportion still in study vs dropped out.

Since 2004 we have data that indicates that government spends about \$200m (approx. \$50,000 per student) on students who start studying in that year but have yet to complete a qualification in the same year. Some of this is obviously legitimate (e.g. year 1 of a multi-year qualification) – what we don't know is the proportion of ongoing study vs dropped out, be it temporarily or permanently.

Examples:

- › Victoria University has approx. 25,000 students, of which approx. 8,000 are first year students. Each year there are typically 10-12,000 course changes by first years.
- › For New Zealand Industry Training Organisations, the annual withdrawals by those who did not complete is 21%; 23% of participants changed jobs in the same industry. While pay rates are poor, pay was not a driving factor for change by 78% of trainees.

¹⁷ Students Moving Overseas Research Report (2017), Inland Revenue

¹⁸ New Models for Tertiary Education (2017), The Productivity Commission

¹⁹ *ibid*

Other groups are still prone to poor decisions. Generally people who have more life experience are likely to be more certain about what course of study they wish to do and the outcomes they are likely to achieve. Even in a relatively short period of time (i.e. 18-22) change can be significant and this experience will drive decision making.

As noted earlier, the tertiary education system assumes that people know what they are doing and that learning is a linear path. In fact, change is natural and will occur, particularly for the youngest demographic.

The 2017 Productivity Commission *New Models for Tertiary Education*²⁰ report shows the high cost of changes in study choices for both students and government. Students are often punished heavily for trying to change. Many providers try and lock them into study not because it's better for the student, but because it helps secure funding for the provider and contributes to positive Education Performance Indicators.

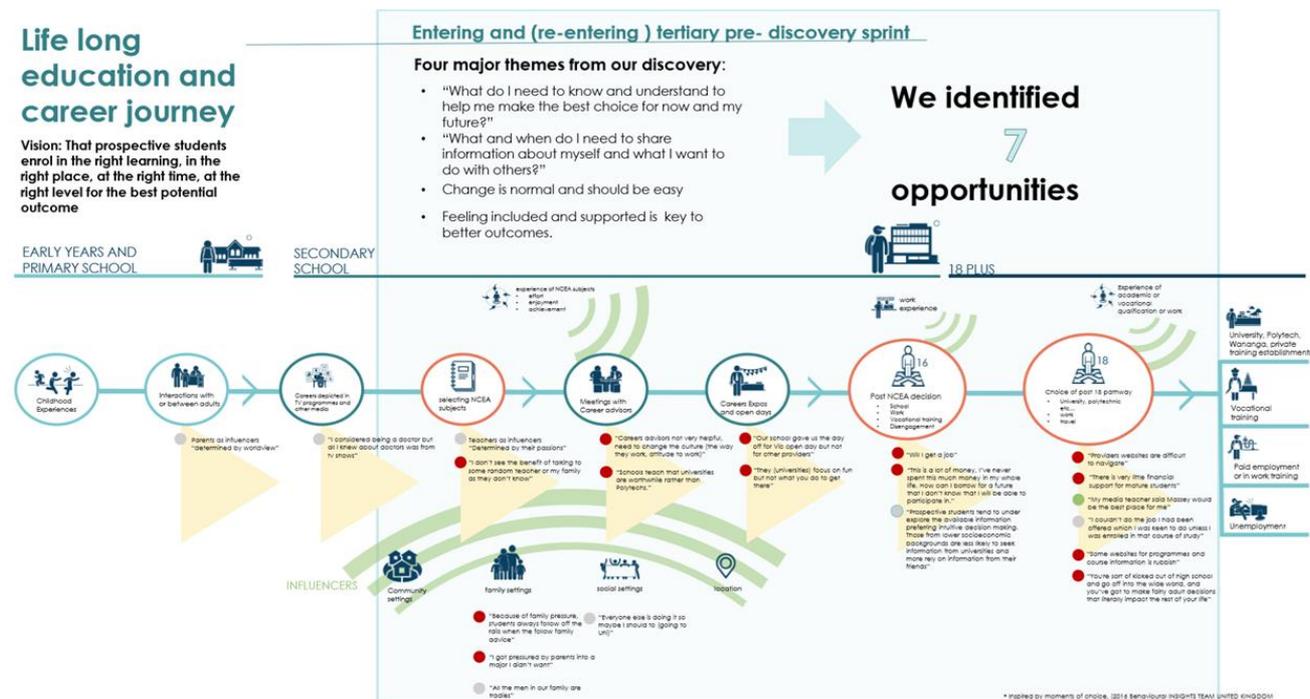
There is rich opportunity here, to acknowledge and design for typical and natural change which is linked to life stage.

Customer journeys

Because of a student's context, life stages and influencers, no one person has the same journey entering tertiary education. Some people enter directly from school and some enter later (i.e. mature students), some enter via work, some come from overseas to NZ and some don't access further education at all.

The simplified life-long pathway

While each of these journeys have their own points of pain and delight, there is a common career journey that applies to people finding a career. The simplified career journey (see below) has been modified for New Zealand from a UK example created by their government Behavioural Insights Team²¹, and represents the journeys we have seen through our research.



²⁰ New Models for Tertiary Education (2017), The Productivity Commission

²¹ Moments of Choice (2016) UK Behavioural Insights Team

Figure 3: The life-long education and career journey

Throughout the discovery we documented the customer journeys of people [deciding to study, what to study and where](#) through to [enrolment](#) and [starting study](#). These journeys are represented in a google draw document and can be found via the above links.

Data touchpoints

In addition to the visible customer interactions students have, we also mapped the data used to support a student's interactions with the education sector, other service providers, and key information sources (e.g. identity information from Department of Internal Affairs). The map or information supply chain is loosely based on an actual student, a young Pasifika mother of two who left school in year 12. She later entered tertiary to better her life and that of her young family. Sapoa Rimoni is now a Site Engineer for Hawkins Infrastructure and she is one of the faces of the [Engineering Education to Employment](#) initiative. Her story is described in various media articles promoting women in the construction industry.

Information supply chain

We abstracted an information supply chain based loosely on the story of Sapoa, plus the typical patterns related to life in general and specifically the journey through the New Zealand education system. The result identifies the typical data touch-points over the course of the life of an individual, with an emphasis on education to employment. It reflects a lifetime view of learning. Of note is how often identity and education information is collected and re-used from birth throughout the educational to employment journey. This representative [information supply chain can be accessed here](#).

It illustrates that:

- › Information about people is captured all over the New Zealand public system and other service providers.
- › For everyone, we ask them to provide the same information about themselves over and over, right across the public system.
- › There is an abundance of data that is available that could be reused to improve the enrolment process for students and their supporters plus education providers and support organisations. Just within the context of tertiary education we have interrelated connections between: individual identity and status, the health and education systems, financial obligations and entitlements and employment.
- › With consent, a students' information when they enrol could be used to update other government services and allow for easier access to other public services and entitlements e.g. fees free, scholarships, student loans and allowances, electoral roll enrolment, etc.
- › There is resonance with healthcare analogy – a “lifetime learning record” that gets modified/updated from each educational episode – it is more than a discrete number of unrelated educational events.

The information supply chain raised these questions:

What if students could choose to give us consent to access certain parts of their information story when needed?

What if during the enrolment process a student or their caregivers could ask Department of Internal Affairs to verify their identity and status without needing to front up with a birth certificate or passport?

The same for their education number from the Ministry of Education? Record of Achievement from NZQA or other like authority? What other areas of information could we apply this principle?

As a result, these functions were identified as potential candidates for reuse²²:

- › careers advice and course planning – building upon and not replicating learning already gained
- › fees free eligibility and entitlement²³
- › financial assistance – scholarships, student allowance, student loans, social welfare assistance
- › course eligibility
- › identity information
- › qualification and education information

Common data characteristics were identified related to these functions. These characteristics help determine how we leverage digital to architect, design and manage information systems (i.e. in terms of both data and applications). A full list of these characteristics is in Appendix One.

²² Reusable components is a set of functions that could service more services. Current examples include a government services register and API (Application Programmable Interface) enabled entitlement business rules, which would be used by several “life event services” as well as 3rd parties. Government can establish and run reusable components that will offer value to customers, third parties and agencies.

²³ www.feesfree.govt.nz

Four key themes

Four key themes surfaced during the meta-analysis of the 94 research items and documents, and the focus groups and interviews. The themes articulate the major ideas about and concerns of students and will shape how we redefine their customer experience in the future.

Each major theme is presented with:

- › sub-themes identified from the research
- › evidence supporting the theme
- › assumptions or insights implied from the evidence
- › needs or features identified from research
- › why it matters
- › need statements.

Theme One – “What do I need to know and understand to help me make the best choice for now and for my future?”

Themes noted from the research

- › Information about tertiary education is available but it is frequently skewed or fractured e.g. hard to find, navigate, or join up. There is enough information out there but it's difficult to consume. There is so much information that it's hard to find what you're looking for.
- › Student decision making considerations are varied and variable. Personal circumstances can have a big impact on a student's ability to study the things they would like.
- › Parents idealism is often based on previous generations thinking – and could be due in part to the “bounded rationality” problem. It's hard to envisage what it's really like if you or anyone in your reference group haven't been there – for better or worse. It constrains real opportunities to do better or have unrealistic notions of what is possible for their kids. Often teachers are a bigger influence.
- › Tertiary provider publicity is location based. Big tertiary providers target nationally whereas smaller providers are restricted to local or regional promotion.
- › There is the perception that University is “better” than other places of study.
- › There is an inconsistent understanding of what “tertiary education” means in its broadest sense.
- › Careers advisors are sometimes perceived as a bit irrelevant, under- or un-informed, or even unhelpful.
- › There is a lack of understanding about the full financial implications and opportunities to support tertiary study, e.g. information about scholarships. For school leavers, most don't know what scholarships are available and have little financial knowledge or understanding of the financial impact of study.
- › Students who are well informed of the cost of study were less likely to withdraw for financial reasons.

Evidence

- › “Providers websites are difficult to navigate through.”

- › “Careers advisors are not very helpful, need to change the culture [the way they work, attitude to work]. ” “Careers advisors don’t care about the end goal.”
- › Prospective students tend to under explore the available information preferring intuitive decision making. Those from lower socioeconomic backgrounds are less likely to seek information from universities and more rely on information from their friends.²⁴
- › “Someone just needs to teach them [prospective students], my friends and parents were quite confused.”
- › “Hard to get all the information about class times and costs to plan work schedule ahead of time” – Mature student
- › “Our school gave us the day off for Vic open day but not for any other providers.” – High school leaver
- › “I considered being a doctor but all I knew about doctors was from TV shows.”
- › “There is little financial support for mature students.”
- › “I ended up asking my Mum to do some digging because, I dunno, I found it a lot easier for her to get the information for me than me get it.”
- › “Didn’t seek info about other places, just went to Otago because it was close to home”
- › “My media teacher told me Massey would be the best place for me.”
- › “I want info bit by bit instead of an overload all at once.”
- › “Some websites for programmes and course info are rubbish.”
- › 47.8% of students consult websites of tertiary providers, 57.1% consult their families for study advice, 33.1% consult Careers NZ²⁵.
- › “This is a lot of money, I’d never spent so much money in my whole life. How can I borrow against a future that I don’t know I’ll be able to participate in?”
- › “Schools teach that a university is worthwhile rather than a polytech.”
- › “I don’t see the benefit of talking to some random teacher or my family as they don’t know”²⁶
- › “Who’s the best, who can I trust, which one will be the right fit for me?.”
- › “Lots of [university] advertising.”
- › “It was correspondence so I could fit it around my life, I couldn’t go into class every day because I had young children at home.”
- › “Everyone else is doing it so maybe I should too [going to Uni].”
- › “They [universities] focus on the fun stuff but not what you do to get there.”
- › “I couldn’t do the job I had been offered which I was keen to do unless I was enrolled in that course of study.”
- › “Will I get a job.”

²⁴ Behavioural Approaches to Understanding Student Choices, National Union of Students/Higher Education Academy/University of Sheffield

²⁵ Students Pathways (2017) Inland Revenue

²⁶ Project Kamehameha Report (2017) Careers New Zealand

- › Deynzer²⁷ found three patterns: 1. Students who were “pulled to university” by their own goals and aspirations for specific career. 2. Students who were “pushed to university” or a particular field of study by parental aspirations or expectations, and 3. Students who “went with the flow”, feeling unable to assert their preferences. By the end of the summer, however, most of these students had taken a different path and did not enrol at university.

Assumptions

- › Existing information doesn’t reflect personal situations and preferences. It also does not provide a realistic view of courses or outcomes.
- › Students want to know polytechs are ok to go into and know it’s an option.
- › Students want to know how a loan will affect them in the future.
- › Without solid financial support students may use expensive forms of finance to fund their study and living expenses.
- › Careers advisors are not a trusted source for students.
- › Financial information support is communicated in ways students can’t understand. Most students do not have a sound financial knowledge. Many families and whanau either don’t support financing decisions or are unaware of how to support students with these decisions.
- › Especially for mature students, people need study options that will work around their lifestyles (i.e. children, work).
- › Perception that you should study something that will direct you into a job.
- › Data and consent processes exist to be able to personalise information.
- › Students and families often don’t know where to turn to for trustworthy, current and accurate information.
- › Influences on decision to study are varied, there is no clear group or person that has more influence than another. The exception to this is Pasifika students where family is very influential.
- › Personality and learning preferences are important in student success yet underrepresented in study choice.
- › There are few incentives for institutions to change their learner environments to accommodate diversity and realise potential.

Why does this matter?

- › creates a greater understanding of what it takes to pursue aspirations. Career and study choices exist in the context of the lives people want to lead, and what it will take to get them there.
- › helps uncover the assumptions or unconscious choices people make. Many potential students see their future potential in terms of "others like me". As such, they may not take up study options that would suit them because that would move them out of their circle of friends and community.
- › broadens the audience who can access the right information at the right time. People have varying needs and capacities to navigate any social system. For those less able to self-navigate, information alone is unlikely to be enough. For the most able, they can typically readily use information. Any system that relies on information provision alone, will just exacerbate middle class capture.

²⁷ Stumbling blocks or stepping stones? Students experience of transition from low –mid decile schools to university. (2010) Auckland: Starpath Project, The University of Auckland.

- › creates a sense of having real options. Choosing to engage in tertiary study and what form of tertiary study is broad in reality. It can be limited by pre-existing perceptions, e.g. the perception that University study is only for people who can and want to be doctors and lawyers.
- › creates trust and confidence in the education system. Access to relevant and understandable information means students and their supporters can make better choices at the right time for their circumstances.
- › helps improve overall productivity. New Zealand has poor productivity relative to its participation in study²⁸.

Needs or features identified

Relevant, reliable, realistic, actionable, discoverable, visual, authentic, trust, understandable, outcome based, locatable, visible, tailored, non-prescriptive, define success for me, timely, interactive, relatable, inclusive, collaborative, social, making the serious fun, self-awareness, paper and digital, succinct, informative, evidence based.

Needs statements

- › **Access** to information and gaining **understanding** needs to be possible through multiple channels, e.g. online, through advocates, through relevant social networks etc.
- › Information needs to show how the study options would likely change students and their supporters' lives (**i.e. outcomes**). It must be **actionable** to show them how they can achieve that **outcome**.
- › Information needs to be **cohesive*** with existing channels, so students are not overwhelmed and confused (*fits together).
- › Information that students need to make good study choices must be **relevant** to their lives, aspirations and personality.
- › Information about study choices needs to be clear and easily **discoverable** to help students and their supporters **understand**, specifically: **plain English**
- › translated into other **languages** relevant to the target audience
- › **visualised** as applicable
- › Information needs to be delivered in a way that is **authentic** and **realistic** creates **trust** to build students confidence in their decisions.

²⁸ There is a relationship between skills and productivity but there are other factors at work. The Productivity Commission's productivity hub has a discussion on the NZ 'paradox' - higher relative educational attainment rates but lower levels of workplace productivity, which is not really driven by skills mismatches in the main. Further, our graduates have lower returns to education than other comparable jurisdictions. This comes through in the OECD Education at a Glance Report available on the Education Counts website. Further, our graduates have lower returns to education than other comparable jurisdictions. This comes through in the OECD Education at a Glance Report available on the Education Counts website.

²⁹ Supporters include anyone that help students with their decision making, ongoing study and achieve outcomes that allow the student to thrive regardless of the educational achievement. Supporters can be people and groups such as family, whanau, community, employers, mentors, agents, advisors.

Theme Two – “What and when do I need to share information about myself and what I want to with others?”³⁰

Themes noted from the research

- › Repetition of information provided especially with multiple applications and interactions with study related providers and other organisations that supply services to students.
- › The break between secondary and tertiary is either a holiday or a stressful time depending on preparation that’s been done.
- › Students are pressured to make decisions in a tight timeframe.
- › Students expect it to be hard to enrol for study.

Evidence

- › “Too many ropes to go through.”
- › “Uncertainty around environment process - it’s a black hole.”
- › “I had a big panic about money probably in January when I was trying to get everything sorted.”
- › “Hard to remember dates things are due and which information needs to be sent where.”
- › “Cross crediting was hard.”
- › “I don’t want to send my personal info and documents to more than one uni or make multiple copies and get them all verified.”
- › “You need to make sure you send the right information to the right place.”
- › “The process of pre- enrolment was hardest.”
- › “I want to do the minimum in filling out a form to apply.”
- › “I’ve emailed the uni three times no reply.”
- › “Unclear about changing major.”
- › “I want to know why I have to make so many accounts.”
- › “Application process harder than expected... lots of deadlines around the same time.”
- › “Trying to remember the application dates and NCEA is overwhelming.”
- › “Students seek out info but often need help to understand it.”
- › “I think the schools could probably do a little more about advertising and help.”
- › “High school students have poor time management and leave decisions till later to avoid responsibility.”
- › “Uni students going into halls have to sign before they even have confirmation from Uni’s.”
- › “Most high schools’ students would leave it to mid or late in year to sort out and finalise these things so maybe it would’ve been best if I started earlier.”
- › “Getting parents income form was the most difficult and frustrating.”

³⁰ Submitting the right information to the right places at the right times.

- › “Trying to sort out exams... Real Me, IRD numbers - very confusing.”
- › “I want to know early when the key dates are so I don’t miss opportunities.”
- › Studylink advised that both their customers and they are having trouble with parental income and third-party forms and complex policy areas e.g. limited full-time study, independent circumstances allowance.
- › People with literacy and numeracy issues plus those who don’t know what they want to do find enrolment hard.

Assumptions

- › Parents are out of date - from the pre-enrolment process they can offer little relevant help.
- › The “bounded rationality” problem – it’s hard to envisage what it’s really like if you or anyone in your reference group haven’t been there, for better or worse. And, it constrains real opportunities to do better or have unrealistic notions of what is possible, e.g. parents’ beliefs about the best options for their kids.
- › The enrolment process seems daunting for students, not user friendly.
- › First time tertiary students (especially secondary school to tertiary) are time poor and stressed due to large amount of information to consider.
- › Seeking, sourcing and providing information and evidence is often hard e.g. parental income.
- › Uncertainty with Studylink applications - for many students, the requirement to apply by 16 Dec is difficult because they are not sure what to apply for as NCEA and university entrance results are still unknown at this time.
- › Depending on your circumstances getting support can be difficult e.g. over 55, bankrupt, benefit to study, part-time work.

Why does this matter?

Making the process clearer and easier will reduce poor choices and increase engagement.

Needs or features identified

Ask once, reliable, tell me once, early, responsive, use authoritative sources, consent, assist me (if my circumstances are complex), clear, timely, inclusive (of people regardless of the complexity of their lives - does to prohibit or misrepresent).

Needs statements

- › Information used for multiple purposes in the tertiary enrolment process needs to be asked for once and reused as needed. Students shouldn’t have to duplicate and repeat the same thing for different tertiary providers and associated processes (such as student loans and allowances) *e.g. Information that covers a period could be aligned (calendar/academic/tax year) or allow for flexibility to submit what is readily available.*
- › Information already held by authoritative sources could be shared directly with the appropriate consent to reduce the amount of effort required to complete the tertiary enrolment process.
- › Information about key events needs to be provided in a timely manner so students and their supporters are clear about what actions need to be taken and when.

- › Information collection processes need to be easy and feedback needs to be responsive e.g. *students should not have to manually calculate anything that could be derived or calculated from information already supplied.*
- › Information needs to be delivered in a way that assists and supports students whose circumstances are complex so they can access tertiary education as easily as possible - remove any unnecessary barriers. Information needs to help raise the aspirations of prospective students and their supporters who just do not see tertiary education as an option for them.

Theme Three – Change is normal, and should be easy.

Themes noted from the research

- › Students, especially first-time students straight out of secondary school often feel a big sense of ambivalence even after making a choice.
- › Students don't know if something is right for them until they have tried it.

Evidence

- › “Did I waste my time; will my studies count towards anything?” when talking about changing degrees
- › “Switching from one tertiary provider to another is hard”
- › Cost is a barrier to cross crediting papers, this makes it hard to switch providers
- › “Course wasn't working around my life so I changed providers”
- › “I struggled with university, but after switching to polytech I was much happier”
- › There is “stigma about changing your mind”
- › “Lots of students have withdrawn because it wasn't what they expected”
- › “I got pressured by my parents into a major I didn't want”
- › “The course content wasn't what I thought it would be”
- › The course was “more theory based than expected and teachers were not very accessible”
- › “I loved polytech because it was more hands-on, smaller classes and direct access to teachers”
- › “Because of family pressure, students always fall off the rails when they follow family advice”
- › At school “I had to choose between art and drama even though they were both things I was considering as a career”
- › “I wanted to be a lawyer but when I talked to someone who worked in law, I realised it wasn't right for me”
- › “Tertiary education is not well-placed to respond to uncertain future trends and the demands of more diverse learners”³¹
- › “The system does a good job of supporting and protecting providers that are considered important, but it is not student-centred”³²

³¹ New Models for Tertiary Education (2017), The Productivity Commission

³² *ibid*

- › New Zealand’s current tertiary education system “students are disempowered and mobility between providers and courses is thwarted”³³
- › “The system does not support students to change their path of to have their credit or prior teaching recognised”³⁴
- › “Providers have little incentive to help students change their course of study”³⁵

Assumptions

- › The group that would benefit most from education are the most likely to make a poor choice and least likely to recover from one.
- › The older you are the more likely you are to make the right choice. Even if it is your first time in tertiary e.g. self-knowledge, less influences.
- › Lifelong learning is episodic, variable and diverse. It occurs in a series of sprints, it is not a linear experience.
- › Youth need to know that taking time to know yourself better before deciding to study or not is ok.
- › Difficulty of transferring/continuing discourages further study and encourages withdrawal.
- › We expect students (especially first-time studiers and those moving from school to tertiary) to make rational decisions but people’s development and experiences are still growing.
- › Making change easier will lead to better outcomes.
- › Providers define their own rules regarding cross-crediting so there are inconsistent rules across different providers.
- › Most information and enrolment processes don’t accommodate cross-credits.
- › High school decisions on subjects can affect courses of study at tertiary - this may have a detrimental effect on course completion.
- › Students withdraw from courses and qualifications for a range of reasons e.g. ITOs work life balance and issues with employers; university it’s because of incorrect fit with students.

Why does this matter?

- › Lifelong learning is episodic, variable and diverse. Making change easy for students would allow them to recover more quickly and result in a better outcome.
- › Current practices reinforce poor outcomes across generations who can least afford and struggle to recover from change.

Needs or features identified

Easy, not judged - accepted, affordable, supported, consistent, continuity, predictable, consent, space and time (to make decisions), use authoritative sources, informative.

³³ ibid

³⁴ New Models for Tertiary Education (2017), The Productivity Commission

³⁵ ibid

Need statements

- › Students need changing course or institution to be accepted as normal and natural and be supported in their choices.
- › Students need the process of changing course or institution to be easy and consistent that minimises time and financial impacts.
- › Students who are thinking of change need space and time to help decide their next steps.

Theme Four – Feeling included and supported.

Themes noted from the research

- › Students tend to seek out information, but often need help to understand it³⁶.
- › There is currently little support from schools to do with the transition from secondary to tertiary.
- › Desire for contact with a professional from the area they want to go into.
- › Opportunity and desire for mentors
- › The tertiary system isn't set up for students from Māori-medium schools, and fails a lot of other Māori students from English-medium schools too.
- › Creating communities of learning (groups of kids learning and progressing together)³⁷

Evidence:

- › “A sound-board person to bounce ideas off would have been helpful”
- › “I don't see many of my peer group around” (in tertiary study)
- › “I feel supported by my wife and my community at Vic”
- › “I didn't have a good understanding of the reality of the job until I was in my placements as part of my course”
- › “Hands on experience in the industry would have been helpful”
- › “No one wants to be wrong”
- › “Lots of Pasifika students go into uni not knowing what to do”
- › “I didn't really think about it, I was pushed into it”
- › Some kura have “learned to play the game” of NCEA because “the whole system fails to recognise our world-leading curriculum for Māori-medium schools”
- › “While studying they are also trying to figure out adult life” and “learning to weigh the options”
- › “Pacific workers are often unaware of the range of opportunities available for learning”³⁸
- › “I spoke to people already doing this degree and found them most helpful”

³⁶ Student Pathways (2017), Inland Revenue

³⁷ Martin Kurzweil, D. Derek Wu <http://www.sr.ithaka.org/publications/building-a-pathway-to-student-success-at-georgia-state-university/>

³⁸ Pacific learner success in workplace settings (2016), Dr Debbie Ryan, Lisa Kitone and Racheal Fleming

- › Pacific learners are overrepresented in industry training, generally enrolled in programmes at lower levels, and concentrated in particular industries³⁹.
- › “The system is not well-placed to cater for growth in learners seeking to upskill/retrain”⁴⁰
- › “These learners are likely to be looking for specific skills rather than full qualifications”⁴¹
- › The “current system does not reach out to extend the benefits of education to groups that have traditionally missed out on tertiary education”⁴²
- › Māori learners need a strong community at tertiary - “Māori need to socially connect”
- › “Māori kids have to go looking for role models who look like them”
- › “A wharekura graduate who wants to do Māori studies at Uni has to do te Reo 101 - but they’re already far above the knowledge that a university can offer”
- › “Wānanga accommodate Māori learning much better than universities but there is a perception they’re not as good as universities”
- › Māori generally and Māori-medium kids are particularly at risk of non-completion or taking longer to complete tertiary.
- › At tertiary “having assessment in te Reo is only part of it - and you have to fight for that - but you still don’t get taught in it either, even though this is a legal right”
- › “Māori students are more likely to complete university if they have certain characteristics like a mother with a tertiary education”
- › Wharekura schools can’t continue to grow when the system crushes the expectations of their students”
- › Students that get through the first year are much more likely to complete their qual, especially for Māori”
- › “Teachers biases against Māori is messaging that limits the students’ expectations on themselves and their parents expectations for them”
- › People who come from less privileged backgrounds are far less likely to attend tertiary education when compared with those who have had a privileged upbringing. Approximately half of those coming from a decile 1 or 2 school will not progress directly into tertiary education. That’s compared to those who attend a decile 9 or 10 school where 70.2% will progress directly into tertiary education. This gives an indication of the correlation between parental income and likelihood of tertiary education. However, the statistics do not tell us how many of the students who do not go directly to tertiary decide to enter tertiary later in life⁴³.

Assumptions

- › Connecting people with students or professionals they can relate to would give them a more realistic view
- › Students want to know they are/feel supported for change and see how it will affect their future

³⁹ ibid

⁴⁰ New Models for Tertiary Education (2017), The Productivity Commission

⁴¹ New Models for Tertiary Education (2017), The Productivity Commission

⁴² ibid

⁴³ www.educationcounts.govt.nz/statistics/indicators/main/education-and-learning-outcomes/school_leavers_entering_tertiary_education

- › Hard to know what it's like to work in the job/career/industry until you actually do it. Sometimes hard to know what the study itself is like as well.
- › Representation matters: if you can't see people like you in a space/place you are much less likely to consider it an option and less likely again to choose it.
- › Regardless of what stage of life a student is - having support from family and community will help outcomes a learner will achieve.
- › People in industry or who are, or have studied the same courses would be willing to help others.
- › Many academic courses and career pathways are culturally biased towards Pākehā institutional ways of learning and working.

Why does this matter?

Students that feel included and supported will achieve better outcomes.

Needs or features identified

Accepted – not judged, connected, my success, person to person (or group), feel safe, paper and digital, explained, positivity, recognition, included, visibility, clarity, certain, reinforcement, self-awareness, stability.

Need statements

- › Students need to feel connected, accepted and safe while they work out what success means for them and work towards it.
- › Students need recognition of the communities they associate with to help feel accepted.
- › Students need positivity and recognition of themselves as a person and their ability and experiences to help them feel accepted.
- › A range of teaching delivery styles and mediums need to be available, so that students and their supporters are supported whatever their abilities or preferences.
- › Learning environments need to be explained to students so they can choose the best fit for their circumstance - a good fit will help them realise their potential.

The opportunities

One of the key deliverables of the work is to define a range of evidence-based opportunities and describe the change space that could be explored in more depth in future design work. The result is a prioritised list or backlog of work that could be explored in the future for the life event.

This section of the report describes the **seven opportunities** we identified after an in-depth review of existing documented evidence, customer engagement, and discussions with subject matter experts.

1. Increase the relevance of information. It needs to fit students with lives, aspirations and personalities so that their choices align with their desired outcome.
2. Providing cohesive and actionable information that clearly shows how different study options likely affect life outcomes for students and their supporters.
3. Increase efficiency and reduce unnecessary effort by only asking for information if it can't be obtained from existing authoritative sources.
4. Provide timely and actionable information about key choices and events to create certainty for students and their supporters and avoid missed opportunities.
5. Recognising that change of study is normal and natural, particularly for first time students going directly into tertiary study from secondary school. Supporting and assisting students' progress through change will result in better outcomes.
6. Raising and recognising students' feelings of connectedness, acceptance, safety and recognition of their abilities will lead them to achieving better outcomes.
7. Ensuring there is a range of teaching styles and mediums to help students and their supporters make study choices and choose a learning environment that suits them will help them realise their potential.

These opportunities are organised by the four themes described earlier. The themes and their corresponding opportunity statements are not presented here in any particular order.

Theme One – “What do I need to know and understand to help me make the best choice for now and for my future?”

1. Increase the relevance of information. It needs to fit students with lives, aspirations and personalities so that their choices align with their desired outcome.

Possible change space:

- › Review the way information is collected, distributed and re-used to fit with students' lives and their applications and re-enrolments in tertiary study.
- › Review the current focus of qualifications over courses – a focus on courses and micro credentials will likely be a better fit for the future.
- › Review the publicly available employment data currently only available at national level rather than by provider, course/qualification or region. More detail/different cuts of this data may provide more insights and result in better decisions about what to study, where and associated employment prospects. (Note that employment and outcome from tertiary education data by provider is made available to providers but it's not currently published to the public - likely to be addressed in 2018)

- › Review how personality affects success in tertiary and how this information can be used as an indicator for making better choices about tertiary study.
- › Review the student’s availability vs the required time commitment for a course - what different forms of teaching delivery could better serve a student’s needs and life circumstances? E.g. distance learning, intensive short courses, evenings, classroom based etc.
- › Tap into the science of choice architecture and explore the kinds of “virtuous nudges” that could be given to prospective students to help them plot the best course of action⁴⁴.

2. Providing cohesive and actionable information that clearly shows how different study options likely affect life outcomes for students and their supporters.

Possible change space:

- › Personalising and tailoring contextual information to help show what study options are available and what actions need to be taken to achieve their initial goals.
- › Identify how information can be delivered in a way that allows students and their parents (and other supporters) to engage in a positive and constructive conversation about study choices and associated costs (money, time etc.).
- › Create a clear and easily navigable network of information sources that show choices and their outcomes post study. Today there is so much information but it’s not often useful to those with the greatest need and who would benefit the most from taking the step to engage in tertiary study.
- › Facilitate individual reviews from students of institutions and courses (like [Yelp](#)). This might be helpful for students to identify which institution is right for them.
- › Differentiate what is needed for the well-known “academic” pathway from non-traditional pathways. (For example, first in family to access tertiary education; older learners already in the workforce who need to re/up-skill to respond to the changing nature of work).

Theme Two – “What and when do I need to share information about myself and what I want to with others?”

3. Increase efficiency and reduce unnecessary effort by only asking for information if it can’t be obtained from existing authoritative sources.

Possible change space:

- › Using authoritative sources that we know are available but not yet joined up in a useful way.
- › Enabling better linkages between government data sets that would sensibly be linked, e.g. education and employment.
- › There is the potential to be a broker and partner to collect once and provide to many.

4. Provide timely and actionable information about key choices and events to create certainty for students and their supporters and avoid missed opportunities.

Possible change space:

- › Explore the key points where choices are made or at least considered. These include:

⁴⁴ <https://www.economist.com/news/international/21722163-experimental-iterative-data-driven-approach-gaining-ground-policy-makers-around>

- entering secondary school for immediate subject choices
 - year 10-13 for subject choices
 - tertiary application enrolment, scholarship and accommodation dates
 - key things overseas based students need to do to prepare
 - older learners entering tertiary for the first time (or re-entering) to re/upskill.
- › Automate reminders (e.g. via calendar reminders or automated emails) on approaching deadlines for students and their associated information sources.
 - › Allow for people (especially referees that are not the student) to enter information in the way they want to (e.g. txt, email, app, etc.)

Theme Three – Change is normal, and should be easy

5. Recognising that change of study is normal and natural, particularly for first time students going directly into tertiary study from secondary school. Supporting and assisting students' progress through change will result in better outcomes.

Possible change space:

- › Policy or funding interventions to encourage portability and cross crediting.
- › Influencing social norms in school, tertiary and wider society that change is normal and provide information about the how to navigate it effectively.
- › Reviewing timing and entitlement consequences to lessen detrimental impacts of change.
- › Presenting online distance flexible learning as an option so that the student can time their study to suit their own schedule rather than having to fit in with an institution's timings.
- › Providing a virtual assistant (or real-time human chat or chatbot) to help students navigate common life changes (e.g. moving city, dealing with illness, change in income etc.)
- › Presenting structured pathways that provide clear navigable ways in and through tertiary education⁴⁵.

Theme Four – Feeling included and supported

6. Raising and recognising students' feelings of connectedness, acceptance, safety and recognition of their abilities will lead them to achieving better outcomes.

Possible change space:

- › Influencing social norms that many students need significant support (pastoral care as well as financial) to achieve their goal.
- › Harness the power of communities they associate with to help students with their study choices and keep them on track.
- › Digital techniques to create introductions where personal relationships don't exist. This could be particularly important for tangata whenua and/or Pasifika where introductions and relationships have a bigger impact on making study choices.

⁴⁵ <http://www.completegeorgia.org/what-momentum-year>

- › Provide virtual assistant (or human chat or chatbot) to provide assistance in navigating potentially unsafe situations. Games, VR and/or simulations might also be helpful, acknowledging that generally the target audience might be young and somewhat naive.
- › Identify other ways for prior experience to be considered for entry to study.

7. Ensuring there is a range of teaching styles and mediums to help students and their supporters make study choices and choose a learning environment that suits them will help them realise their potential.

Possible change space:

- › Not just a digital focus – personalised omni-channel experience that allows students to see and experience which learning environment might fit them.
- › Interventions to align learning environments with individual learning styles - help prospective students understand their learning style and find a place that fits them.
- › Testimonials or case studies of “people like me”.
- › Creating communities of learning (groups of kids learning and progressing together)⁴⁶

⁴⁶ Martin Kurzweil, D. Derek Wu <http://www.sr.ithaka.org/publications/building-a-pathway-to-student-success-at-georgia-state-university/>

Measuring impact, additional findings, considerations

We will need to measure the impact of any interventions associated with these opportunities – identifying a causal link between an intervention and any improvement will be paramount.

Also, further “secondary” insights related to re/entering tertiary education were identified over and above what has been described already. There are also limitations and further considerations which should be more fully explored.

Measuring the success of future interventions

The types of improvements we may see could include an increase in qualification and course completions and a reduction in course churn when people make better up-front choice about what to study, when and where. Currently there are no holistic measures of success for the sector.

Neither enrolment nor completion statistics alone are reliable indicators of good outcomes for life post study and the effectiveness of it. Measuring outcomes more broadly is recommended.

Additional findings

These have been captured as they have an influence on the experiences and behaviours of students making study decisions, namely:

- › Those students who have not achieved well at high school are more likely to cease tertiary study.
- › There are issues with the funding model for tertiary that could be explored further. It appears that the current model generally reinforces a process that erodes the quality of an enrolment. Many people entering tertiary study incurs high financial cost but their enrolment choice doesn't offer good long-term outcomes. The incentive target for enrolment, because of its links to income, does create an environment that is best suited to helping people make good choices.

Limitations of this work

Two of the lessons from this prediscovery were:

- › there will never a perfect time to start work on a life event and,
- › the size of these life events means we are not likely to be able to cover everything associated with the event in a short period.

Timing issues

We started the discovery knowing the incoming new government would be introducing a range of new initiatives in the first 100 days. These initiatives would require a lot of effort and resource across many agencies, including the ‘fees free’ policy. This had a significant impact on the availability of core team members and subject matter experts from other government agencies.

The discovery also coincided with NCEA exams and the end of the tertiary education year which meant a ready supply of keen secondary and tertiary students to interview and workshop with was limited.

Despite these barriers we were able to reach out to SME's, students and some tertiary institutions to supplement our research.

Areas for further exploration

The gaps described below identify what we didn't have time to research fully or an area that needs more attention:

- › **Students with disabilities/chronic illnesses.** As part of this predisccovery we held workshops where we engaged with several secondary and tertiary students. As far as we are aware, none of the students we spoke to had chronic illnesses or disabilities. From our research, we only found a small amount of information relating to the experiences of students suffering with health issues. There is an opportunity to find out how the experience of students with disabilities or chronic illnesses differs from that of an able-bodied student in good health.
- › **Different high school qualifications.** Students who went straight from high school to tertiary mostly qualified for tertiary through their NCEA results as opposed to other qualifications. This was due to most of schools in New Zealand offering NCEA as the normal route of study. Also, there were limited resources relating to Cambridge, Steiner and other secondary school level qualifications.
- › **Statistical information from providers.** We have identified gaps in how we measure outcomes in the tertiary sector. Measurement gaps include: data about churn rates, ratio of applications to enrolments, and other data that TEC does not gather. This data is held only by the tertiary providers.
- › **Information about churn rates, ratio of applications to enrolments** and other statistics that TEC does not obtain would have been helpful. TEC does not have visibility of the ratio of applications to enrolment on a national level, however the individual TEOs have records. Due to the timeframes we were unable to retrieve those statistics.
- › **Proportion of enrolments that aren't the right course/time/level for a student.** Current data held by TEC does not differentiate between failure and changing courses. This has resulted in switching courses as being recorded as a failure of the original course. There is a need for data to differentiate between someone who has failed their course or simply switched to a different course of study. This will identify the real rate of churn in tertiary education.
- › **International students' voices.** While not a significant gap as we did conduct interviews with international students and Education NZ (who promote New Zealand as a study destination for international students). More of their experiences would have been helpful to reaffirm our research and assumptions.
- › **Voice of the providers of tertiary education.** We engaged with some tertiary education providers but not as many as we would have liked, to have a more complete picture of their worldview. Providers could have supplied us with information that was not attained by TEC, had we engaged with them.
- › **Supporters' voice.** We did have limited engagement with supporters in the way of a facilitated session with a student's mother. However, we did not hold a separate session for supporters of students as we were limited by factors such as time and resourcing. As key influencers for all types of students outlined in the scope, the supporters' voice would have given us a better picture of how students make decisions about study and how these decisions affect their relationships with others. Further research into the supporters of students is an area that could be elaborated on in the future.
- › **The future of work/careers.** We did not do significant research into future trends/possibilities and how they may impact employment and education in the future. Future possibilities and incoming trends could affect the importance of the opportunities we have identified and the ways in which they could be addressed. Research into possible future changes could also provide further opportunities for improvement in the tertiary education sector.
- › **Experiences and interactions with other entities/people.** While mapping the journey of students transitioning from secondary to tertiary, we identified many touch points with third parties, such as

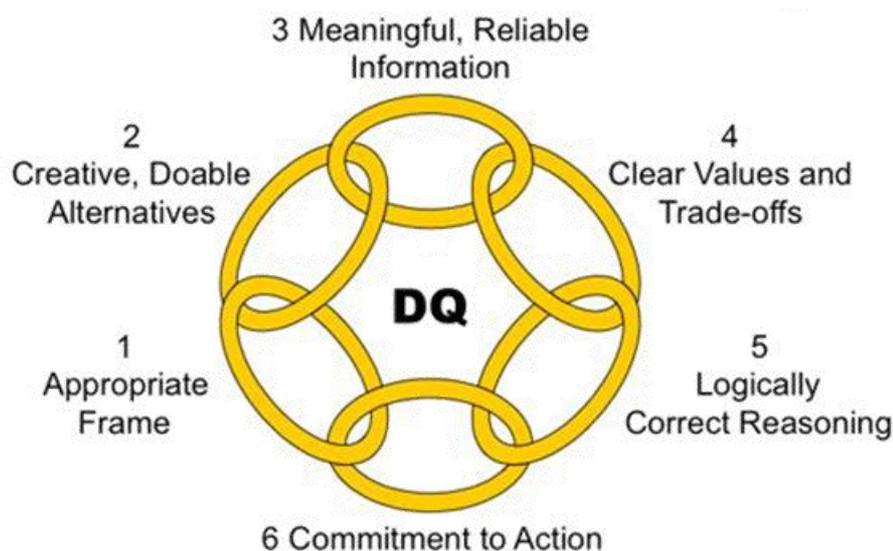
Justices of Peace, tenancy services, RealMe®, doctors and others. These interactions have not been researched in detail and there is little information about whether these interactions have influence on students' pathways entering tertiary.

- › **Financial organisations voice.** Banks and other financial organisations are involved as touch points in students' journeys. We have not investigated the details of those interactions, but there may be possible opportunities for financial organisations to assist students. It is apparent that students have little financial understanding and this could be an area which government could collaborate with financial organisations to raise financial awareness. Due to the scope of this discovery phase, this has not been researched in depth.
- › **Lack of full visibility across work that is currently related to the tertiary space.** We had varying levels of involvement from/engagement with different agencies that this life event touches on, due to the timing of the discovery sprint. Because of this, we did not have a full picture of other work going on in this area that may have helped to inform us, or provide other opportunities to explore.
- › **Social welfare funded study.** There is a gap as far as people who have been funded (or partly funded) by the Ministry of Social Development to undertake tertiary education, to upskill and improve their chances of finding employment and therefore dependence on social welfare. Only one of the students we spoke to in this discovery had their study funded in this way. For a more complete picture of the experiences and touchpoints of students whose study is funded by the Ministry of Social Development, more investigation into this area is needed.
- › **Home-schooled secondary students.** We did not engage with any students who had a background in home-schooling. The students we engaged with had all gone through the more common high school experience. As engagement with prospective and current students was limited, the background of the students we spoke to was equally limited.
- › **Potential students who are not in employment or education.** We were unable to reach this group within this piece of work. This group's experiences would be useful to find out about their barriers to engaging in tertiary education.
- › **Reasons behind not achieving secondary and tertiary education.** Reasons behind not being accepted for tertiary enrolment was also a gap in our discovery. We did not explore the experiences of those who did not enrol, their reasons why and whether this is related to previous schooling. We have identified this as a gap that needs further analysis.
- › **Volume of summer melt in New Zealand.** Summer melt is heavily researched in the United States, however, there was little evidence from New Zealand sources about how frequently it occurs here. Summer melt refers to the students that lose motivation or change their minds about tertiary education over the summer between finishing high school and starting tertiary, and drop out before classes have begun. There is an opportunity for further work on this subject.
- › **First generation New Zealanders and First-in-Family.** First generation New Zealanders refers to those whose parents immigrated to New Zealand and are the first generation of their family to be born here. First-in-Family refers to those who are the first in their family to enter tertiary education. These two categories of students were not researched in detail due to time limitations.
- › **Trends in Massive Open Online Courses (MOOCs).** [Massive Open Online Courses](#) are a growing trend to make tertiary education more accessible. It is outside the ability of New Zealand governmental bodies to affect change in this space, but we have identified MOOC as something that could be researched in another project for opportunities to improve New Zealand tertiary education.

Decision quality

Our brains aren't wired to make good decisions, especially where situations are unique or uncertain. To help assess the quality of the discovery, we used a Decision Quality framework⁴⁷ that requires teams to fulfil six elements to ensure decisions are based on quality information and sound reasoning.

Decision quality framework used



Appropriate Frame – The frame explains the opportunity they are addressing and the decision required. The frame has three components: **purpose** of the decision, what is included and excluded from the **scope**, and the **perspective** applied – how the team approaches the decision and who has been engaged.

Creative Alternatives – These are the many possible options to deliver the desired outcome. Alternatives specify 'what we could do'.

Relevant and Reliable Information – Decisions must be based on relevant and reliable information to understand how each alternative will potentially influence or deliver the desired outcome.

Clear values and Trade-offs – Value describes the outcome we want – what we care about. When deciding it is important we are aware of the trade-offs, costs and assumptions between the alternatives.

Sound Reasoning – Sound reasoning uses the basis of the decision developed in the first four elements to synthesise a clear set of conclusions to present to decision makers that will enable effective targeting of the desired value.

Commitment to Action – No decision is worthwhile if there isn't a commitment to action. The final element of decision quality is providing decision makers with a clear picture of what they are committing to so that the requirements to create 'real' value is clear and results in action.

Approach

Decisions cannot always be made with all the information, and there will come a point where spending additional time on an element of decision quality will not yield additional value for the effort required. For

⁴⁷ Decision Quality: Value Creation from Better Business Decisions by Carl Spetzler, Hannah Winter, Jennifer Meyer (2016)

this reason, the team will at times, either by themselves or with the sponsor, decide when each element has been satisfactorily completed for the decision that needs to be made.

The discovery team tracked their delivery of each element on a scale of 0–100%, with 100% being the target level of information to inform the decision. As mentioned before this might not be all the available information but should represent the point at which additional effort would not yield any greater quality than the effort or time it would take to deliver.

Decision quality score for this work

For this prediscovery the decision quality score was:

Appropriate frame – 90%

The event is wide and diverse with many different student groups and stakeholders. The team narrowed scope and this gave a good frame to explore. The 90% rating reflects that we did not have the opportunity to check the frame with all stakeholders.

Creative alternatives – 100%

Within the scope we created the opportunity statements that resonated with people which has established a starting point of a value stream of work that can be prioritised and worked on.

Relevant and Reliable information – 75%

Quality New Zealand-based research about the event was limited (most research was greater than five years old), so we relied on overseas based research. Where we did not have information, we approached students, institutions and subject matter experts where necessary. The 75% rating reflects these points but also the availability of people we could talk to.

Clear values and trade-off – 90%

While it is too early to describe the trade-offs associated with the opportunities (these will be better understood when each one is investigated in more depth) we have clearly documented the assumptions and evidence associated with these. The 90% rating reflects that we didn't have the full coverage of people that we needed to fully prioritise the opportunities.

Sound reasoning – 100%

We have approached the discovery with a clear frame and rigorous approach in defining each opportunity using evidence and providing and clarity around assumptions.

Commitment to action – 0%

There is no clear owner for the life event across the public sector because the customer experience is shared across multiple entities. Therefore, there is clear direction on what will happen to the findings of this discovery, however, this was known at the start of the discovery. The rating reflects these points.

Remember the score is not a reflection on the quality of the work done by the team or nor does it mean the decision was poor. The decisions are always based on the best information available at the time.

What's next?

There are different pathways into tertiary education – with the traditional “academic” pathway the best understood and well-travelled, as evidenced in the findings herein.

In the opportunities we present, we need to further differentiate between what works for more academically inclined young people and how we cater for everyone else. Non-traditional pathways represent untapped potential and offer the greatest opportunity to add value through what is proposed. This includes both non-traditional learners (i.e. first in family to access tertiary education) and providing opportunities to re/up-skill to people already in the workforce to respond to the changing nature of work.

Tertiary Education Commission

TEC will use the findings of this discovery to further inform both the Careers System Strategy currently under development, as well as feed into the refresh of the Tertiary Education Strategy which will be updated for 2020. In the meantime, it will be used to inform existing and further operating policy and strategy for the TEC.

Ministry of Education

The Ministry of Education has a massive work programme underway and there are several opportunities from within that programme to address partially or wholly some of the opportunities identified. That said there is an expectation that third parties will become involved and even innovatively lead out with the development of integrating services such as data sets and APIs.

Service Innovation Lab

From a Service Innovation Lab perspective, the information found in this discovery will be used to inform future discoveries with other life events, both from a process and knowledge perspective. We now understand the broad picture of the entering tertiary space, who is doing what, and where opportunities lie for service delivery and improvements for students and stakeholders.

Where to start?

The team found a clear pain point for users around enrolment in tertiary education which validates the efforts in improving the enrolment process. During the discovery it also quickly became clear that there is already an abundance of data in the New Zealand administrative system. We could re-use this to materially improve the enrolment process for all concerned – students, their supporters, tertiary education providers and other support organisations.

With consent, existing information about students could be collated and inserted into the enrolment process, thereby reducing the need for students to present documentary evidence in person. Further still, the information collated as part of the enrolment could be used to feed into other government processes and allow for easier access to other public services and entitlements e.g. student loans and allowances, electoral roll enrolment etc.

It will be up to senior leaders within the tertiary education ecosystem to gain support for the opportunities and advance them in further design work.

Acknowledgments

We would like to thank the following people and organisations who helped us during this discovery, our work would not have been possible without your help:

- › The New Zealand Union of Students' Associations
- › Education New Zealand
- › Enspiral Dev Academy
- › Toi Āria, Massey University
- › Open Polytechnic
- › Weltec
- › Victoria University of Wellington
- › Career Central
- › Inland Revenue
- › Ministry of Social Development
- › Ministry of Education
- › Careers New Zealand
- › Department of Internal Affairs
- › Service Innovation Lab
- › Tertiary Education Commission
- › And the many students, graduates, and supporters of students who shared their experiences with us.

Appendix 1 – Data characteristics for tertiary students

The common characteristics of prospective students associated with their eligibility, limitations, obligations, barriers and risks were identified.

These characteristics help determine how we leverage digital to architect, design and manage information systems (which we will describe in terms of both data and applications). This will support us to securely and efficiently access and share data and information between stakeholders in the sector for the benefit of improving the experience for students.

The characteristics are:

- › Relationship and family status – *financial support entitlements*
- › Criminal record – *access to education and ongoing work post study*
- › Citizenship and residency – *access to education, financial support entitlements*
- › Previous school experience and achievement – *access to education*
- › Previous tertiary experience and achievement – *access to education*
- › Ethnicity and culture – *access to education, personal support for study, financial support (i.e. scholarships)*
- › Iwi – *access to education, personal support for study, financial support (i.e. scholarships)*
- › Family connections – *personal support for study, financial support, personal income data e.g. parental income*
- › Employment status – *financial support entitlements*
- › Date of Birth – *identity verification*
- › Place of Birth – *identity verification*
- › Personality type – *alignment with study choice to ensure fit.*
- › Income / financial status – *access to education, financial support entitlements*
- › Gender – *access to education, financial support (i.e. scholarships)*
- › Location – *physical address*
- › Contact details – *email, phone, social media*
- › Eligibility status for visa for international students – *access to education*
- › Age – *access to education, financial support entitlements*
- › Language – *access to education*
- › Education – *ECE, primary and secondary schools*
- › Learning style – *alignment with study choice to ensure fit*
- › Learning disabilities – *access to education (i.e. literacy and numeracy)*
- › Health and wellness status – *access to education (i.e. physical and mental disabilities)*

Appendix 2 – The team

Core Team

Table 2: Core team

Who	Organisation	Role / Expertise
Tanya Boelema	Tertiary Education Commission	Product owner Chief Architect, Change management expert, knowledge management proponent
Glen Thurston	Department of Internal Affairs	Service Innovation Lab Senior Service Designer Group facilitator, very recently from Inland Revenue (so SME)
Alice Barnard	Department of Internal Affairs	GovTech talent programme
Grace Kim	Ministry of Education	GovTech talent programme
Siobhan McCarthy	Department of Internal Affairs	Service Innovation Lab Service Designer

Regular contributors and participants

Table 3: Regular contributors

Who	Organisation	Role / Expertise
Murray Stevens	Tertiary Education Commission	Facilitator, SME
Graham Pohl	Tertiary Education Commission	Quality assurance, SME
Karl Stemp	Department of Internal Affairs	RealMe®, SME
Murray Johnson	Tertiary Education Commission	Strategy, SME
Martin Rothbaum	Ministry of Education	Enterprise Architect, SME
Jane Ratcliffe	Tertiary Education Commission	Careers – channels and digital resources, SME
Paul Soong	Tertiary Education Commission	Careers – Digital Team, SME

Occasional contributors and SMEs

Table 4: Occasional contributors

Who	Organisation	Role / Expertise
Tony Scott	Tertiary Education Commission	Operational policy design and implementation, SME
Sam Egan	Tertiary Education Commission	Operational policy design and implementation, SME

Liam Neal	Tertiary Education Commission	Recent graduate working in operational policy design and implementation, SME
Mark Sands	Inland Revenue	Data Innovation, SME
Geoff Williams	Tertiary Education Commission	Information Innovator, SME
Becky Cassam	Department of Internal Affairs	Service Innovation Lab – MSD SME

Other stakeholders and organisations consulted

- › Education New Zealand
- › New Zealand Immigration Service
- › ESIAM Pilot – AUT, Auckland University, Skills Org, TEC, MoE, NZQA, DIA
- › MSD StudyLink
- › The New Zealand Union of Students’ Associations
- › Enspiral Dev Academy
- › Open Polytech
- › Toi Aria, Massey University
- › Weltec
- › Victoria University of Wellington

Appendix 3 – Interviews and workshops

As noted in the report, qualitative research was carried out to supplement the insights gathered from background research and give the team exposure first hand to the experiences that students and their supporters were having. Qualitative research consisted of in depth interviews and focus group workshops with a diverse range of students and their supporters but also tertiary organisations too.

With both methods our goal was to create an environment where a conversation could flow freely and help the participants feel more at ease. The questions described below are what the team used as a starting point to prompt conversation and because of the approach we used, it does not constitute a definitive list of the questions asked. What was recorded was participants' responses and insights and these are described in the body of this report.

Due to the privacy agreement signed by the participants we cannot describe each one in detail. However, we have provided a summary of the participants to show the diversity we were trying to seek and insights from different perspectives. Also, due to the timing of this sprint being during the exam period for both tertiary and secondary school, we had limited access to students. However, we believe we were able to represent their views with the background research which was validated by the students that we spoke to.

In-depth Interviews

Interviewee profiles

Student interviews

- › A thirty-something Māori sole mother who had recently finished a one-year study course that gave her a Certificate level qualification.
- › An early twenties male university postgraduate student who had completed secondary school overseas but moved back to New Zealand for tertiary. Currently working full time and studying part time.
- › A late twenties male recent graduate of a polytechnic working full time in the field he had studied. He had moved to New Zealand towards the end of secondary school to qualify as a domestic student before he began tertiary.
- › An early fifties female serial-tertiary student. Currently working full time in the area, she most recently studied and completed four separate tertiary qualifications over the last 30 years or so. One at university, one at polytechnic and two at PTE's. Some of these qualifications had been funded by Work and Income, and one had been funded by her employer.
- › A 55+ year old woman who was planning to self-fund her postgraduate university studies. Had recently finished her undergraduate degree at a polytechnic (also self-funded). Did not qualify for assistance from Studylink.
- › A twenty-something woman who had dropped out of secondary school early to pursue a trade. She had worked for ten years in that area before deciding to go to university and is currently studying a different area full time, while also working in her original trade.

Questions explored

Who influences you when making decisions about your education?

What influences you when making decisions about your education?

Are you interested in tertiary education? Why?

What are your expectations of tertiary education? E.g. courses, lifestyle etc.
When did you first start thinking about tertiary study/why didn't you consider tertiary study?
Tell me about how you started to find out more about study and if not, why?
What have you found easy/difficult about the process?
What gives you a sense of comfort/certainty or uncertainty in the process?
What do you need to make the right decisions?
What is a 'right' decision?
What three things would you have wanted/liked to be different?
What three things have been beneficial?
Who do you think you need to talk to?
What channels would you use to contact tertiary education providers?
What are your aspirations in life?
Tell us about yourself and your life right now
Where do you see yourself in 2 years? In 5 years?
What were the things that got you to here? How did you end up here?
What choices or options do you think you have available to you?

Non-student interviews

Organisation representatives

We also spoke to representatives from:

- › Education NZ
- › Toi Aria
- › Dev Academy
- › Open Polytechnic
- › Careers Central
- › A range of Secondary school careers advisors
- › Kura Kaupapa Māori immersion school representatives

Questions explored

When do you contact students?
When do you think your relationship starts with students?
Do you also interact with others? E.g. parents, teachers, careers, advisors, friends etc.
What relationships do you have with parents, businesses, career advisors, other institutions etc.?
How do you engage/leverage them?
What opportunities do you see when engaging them?
How do you support these students to make the right choice/s at the right time?

Why do you think students change programmes/drop out?

What do you think your students' expectations are?

What do you think is easy/comforting or difficult/uncertain for students searching, deciding and enrolling?

What features have students told you would add value for their process?

What do you think would help your organisation to help you help students get ready for tertiary study?

How do you remain in contact with students?

Do you do anything around customised contact?

What do you provide those educating prospective students?

What are the biggest challenges to Māori students entering tertiary? What are the unique challenges or barriers to Māori students?

What has been a success for improving outcomes for students in tertiary and beyond?

What kind of aspirations do students and their communities have for the student's future?

Workshops

Participant demographic

Workshop 1 attendees

Two students who had just finished year 13 and were currently applying for tertiary education, one male and one female.

One recent male graduate who had entered university straight after secondary school and already found a job in his chosen field.

One current student who had gone straight to university from secondary school, then switched universities to move cities.

A representative from NZUSA.

Workshop 2 attendees

The focus of this workshop was on Māori and Pasifika students, mature students and international students although we also had attendees of other demographics as well.

Of the nine tertiary students five were male and four female. Six had gone straight from secondary school to tertiary; two had entered tertiary for the first time as mature students; one had studied previously and re-entered tertiary as a mature student. Two of the students were international students. One had come to New Zealand for postgraduate study straight after completing her undergraduate degree overseas. The other had originally come for secondary and stayed in New Zealand for tertiary. In the time she had been in New Zealand she had qualified as a resident and was no longer classed as an international student but had begun tertiary as an international student. The students came from a range of different tertiary institutions and backgrounds, though most had grown up in or around Wellington. Among the group there were Māori, Pākehā and Pasifika students.

The workshop also included 3 Pasifika mentors from Weltec and Victoria University.

Workshop 3 attendees

The focus of this workshop was on secondary school students. This workshop was attended by 2 secondary school students who had just finished year 11 at a Rudolf Steiner school. Also attending the workshop was one of the student's mothers, to give us a supporter's perspective.

Questions explored

Who influences you when making decisions about your education?

What influences you when making decisions about your education?

Are you interested in tertiary education? Why?

What are your expectations of tertiary education? E.g. courses, lifestyle etc.

When did you first start thinking about tertiary study/why didn't you consider tertiary study?

Tell me about how you started to find out more about study and if not, why?

What have you found easy/difficult about the process?

What gives you a sense of comfort/certainty or uncertainty in the process?

What do you need to make the right decisions?

What is a 'right' decision?

What three things would you have wanted/liked to be different?

What three things have been beneficial?

Who do you think you need to talk to?

What channels would you use to contact tertiary education providers?

What are your aspirations in life?

Tell us about yourself and your life right now

Where do you see yourself in 2 years? In 5 years?

What were the things that got you to here? How did you end up here?

What choices or options do you think you have available to you?

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