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Vocational Pathways: Using Industry Partnerships and Personalised Learning to Improve Student Outcomes

Prepared by
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Established by the
New Zealand government in 1995
to facilitate public policy dialogue
between New Zealand and
the United States of America

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Ian Axford (New Zealand) Fellowships in Public Policy

Established by the New Zealand Government in 1995 to reinforce links between New Zealand and the US, Ian Axford (New Zealand) Fellowships in Public Policy provide the opportunity for outstanding mid-career professionals from the United States of America to gain firsthand knowledge of public policy in New Zealand, including economic, social and political reforms and management of the government sector.

The Ian Axford (New Zealand) Fellowships in Public Policy were named in honour of Sir Ian Axford, an eminent New Zealand astrophysicist and space scientist who served as patron of the fellowship programme until his death in March 2010.

Educated in New Zealand and England, Sir Ian held Professorships at Cornell University and the University of California, and was Vice-Chancellor of Victoria University of Wellington for three years. For many years, Sir Ian was director of the Max Planck Institute for Aeronomy in Germany, where he was involved in the planning of several space missions, including those of the Voyager planetary explorers, the Giotto space probe and the Ulysses galaxy explorer.

Sir Ian was recognised as one of the great thinkers and communicators in the world of space science, and was a highly respected and influential administrator. A recipient of numerous science awards, he was knighted and named New Zealander of the Year in 1995.

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Eileen P. Harrity
Wellington, August 2013

EXECUTIVE SUMMARY

Postsecondary education and training are fast becoming essential to the achievement of personal economic security. In the coming years, employment growth in New Zealand is expected to be strong for highly-skilled professions and skilled trades, but weaker in semi- and low-skilled professions.[1] These findings are borne out internationally, as well. Repeated studies have shown that businesses are unable to fill many of the jobs they need to propel their businesses forward.[2] The picture is especially bleak for young people, who have been hard hit by the recent economic downturn. Worldwide, approximately one quarter of all 15 to 24 year olds can currently be classified as "not in employment, education, or training" or NEET.[3] In New Zealand, 14.4 per cent of 15 to 24 year olds were classified as NEETs in 2011, below the Organisation for Economic Cooperation and Development (OECD) average of 18.6 per cent.[4]

The New Zealand Government has made addressing these challenges a priority by selecting with "Boosting Skills and Employment" as one the five Better Public Services Targets. More specifically, the Government seeks to develop "an education system that equips all our learners with skills that allow them to succeed in the 21st century."[5] As one of its specific targets to reach this goal, the Government is aiming to increase the number of young people who achieve the Level 2 National Certificate of Educational Achievement (NCEA), a foundational qualification earned by senior secondary school students.[6] New Zealand's Vocational Pathways are designed to encourage more students to attain an NCEA Level 2, moving the Government closer to its goal that 85 per cent of 18 year olds throughout New Zealand will achieve that qualification by 2017.

The Pathways cover five industry sectors, as depicted in Figure 1. The theory of change guiding the Pathways is that general education and vocational, or career-focused, education can be combined to enable students to develop the foundational skills that all employers are seeking. As such, they serve to address two key issues facing young people today, the disconnect students often feel between what they are studying and their future careers and the challenges students often face in transition into further education and work. Vocational Pathways also develop a common language for educators, students, and employers to all use when discussing education and include tools to make it easy to understand how the NCEA qualification relates to future career options.

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[1] The level of skill associated with a profession signifies the expected level of education or training required to enter that profession. Ministry of Business Innovation and Employment (2012), pg. 5

[2] In its 2013 survey of New Zealand businesses, Deloitte found that 83 per cent of organisations in New Zealand reported that talent shortages are impacting their business results. Deloitte (2013), pg. 4 PwC found similar results internationally, with 58 per cent of CEOs surveyed indicating that an inability to source key skills is impeding growth prospects. The rate of concern among CEOs in the Asia Pacific region, which includes New Zealand, was slightly higher than the international average, at 64 per cent. PwC (2013), pg. 5

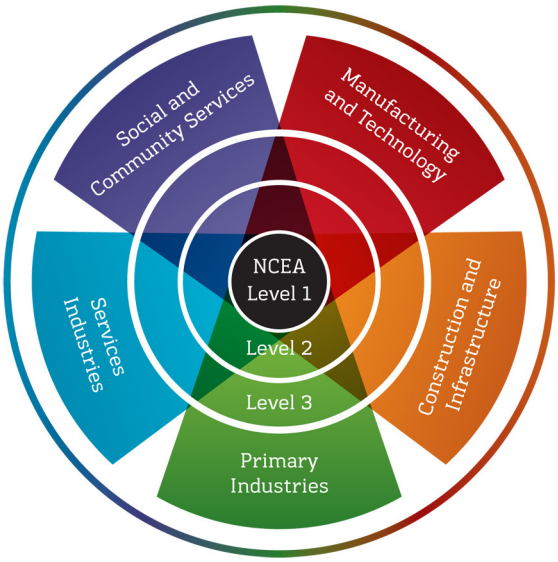
[3] *The Economist*, 27 April 2013 http://www.economist.com/news/international/21576657-around-world-almost-300m-15-24-year-olds-are-not-working-what-has-caused

[4] www.oecd.org/els/emp/50305438.xlsx

[5] New Zealand Government (2012), pg 2

[6] The NCEA is a three-tiered system of qualifications that students enrolled in secondary schools or secondary school-level programs can earn.

Figure 1: The Five Vocational Pathways



In *If We Can Put a Man on the Moon,* a comprehensive study of the common failures in public sector implementation, Bill Eggers and John O'Leary identified the following factors as being key to "the journey to success" for public sector projects:

1. The undertaking must start with a good idea
2. The idea must be given specifics
3. The design must win approval
4. There must be competent implementation
5. The initiative must generate desired results
6. For long run success, what is being done and how it is being done must be continuously re-evaluated[7,8]

Using this framework, the implementation of the Vocational Pathways is on track, however, communicating clear goals and expectations, conducting additional scenario planning focusing on identified risks and creating incentives for participation could improve the chances of implementation success.

Several key challenges face the implementation of the Vocational Pathways, including the fragmentation of skills development programs across government agencies, lack of clarity on the goals and expectations of the Pathways, and resource constraints. Proposed or on-going projects indicate that the Ministry can address these challenges, but should consider them carefully as the implementation moves forward.

The Ministry should consider the following recommendations to further develop the Vocational Pathways and Youth Guarantee:

- Develop clear expectations and goals for the Vocational Pathways
- Revise funding and accountability structures to incentivise goals
- Encourage schools to personalise learning by removing roadblocks

[7] *If We Can Put a Man on the Moon* synthesises the lessons learned from seventy-five international case studies on large public sector initiatives identifying the steps and actions to ensure project success.
[8] Eggers and O'Leary (2009), pg. 26 (electronic version)

- Explore the use of technology to enhance students' Vocational Pathways experience
- Improve transitions by incorporating Pathways thinking into earlier schooling

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PREFACE

"Education, then, beyond all other devices of human origin is the great equalizer of the conditions of men, - the balance-wheel of the social machinery."

Horace Mann, 1848 Annual Report to the Massachusetts School Board of Education

Despite the 165 years that have passed since Horace Mann, the father of American public education, uttered these words, his sentiment still rings true today. Access to supportive and rigorous education has the power to create opportunities for students, especially those at risk of falling through society's cracks. However, data indicates that an "opportunity gap" exists in the education systems of most development nations. As Prudence Carter, a professor at Stanford's Graduate School of Education, explained, "[q]uite simply, children learn when they are supported with high expectations, quality teaching and deep engagement, and made to feel that they are entitled to good schooling; the richer those opportunities, the greater the learning. When those opportunities are denied or diminished, lower achievement is the dire and foreseeable result."[9] For this reason, policymakers, education professionals, business leaders, and community members should continually seek to improve the educational experience for all students to ensure that every child has the opportunity to reach his or her potential.

[9] National Education Policy Center, Press Release announcing the release of *Closing the Opportunity Gap*, 25 April 2013 http://nepc.colorado.edu/newsletter/2013/04/leading-educators-call-new-direction-education-reform-focused-opportunity-gap, accessed 20 July 2013

INTRODUCTION

Postsecondary education and training are fast becoming essential to the achievement of personal economic security. In the coming years, employment growth in New Zealand is expected to be strong for highly-skilled professions and skilled trades, but weaker in semi- and low-skilled professions.[10] These findings are borne out internationally, as well. By 2018, an estimated 63 per cent of all American jobs will require some form of postsecondary education or training.[11] New Zealand's workforce is highly skilled by international standards and the nation has made progress in increasing qualification levels.[12,13] Despite these trends, New Zealand employers are still finding it difficult to fill many of the jobs they need to propel their businesses forward.[14] This skills gap, the difference between the skills the population has earned and the skills employers need has become an issue of focus for policymakers both in New Zealand and internationally.

Young people, especially those who have left school without earning qualifications, are particularly at risk of falling into the skills gap. This risk has increased during the recent economic downturn. Currently, nearly one-quarter of all 15 to 24 year olds worldwide can be classified as "not in employment, education, or training" or NEETs, an increase of almost a third over the rate in 2007.[15] In New Zealand, 14.4 per cent of 15 to 24 year olds were classified as NEETs in 2011, 4 per cent below the Organisation for Economic Cooperation and Development (OECD) average of 18.6 per cent.[16] However, the relative picture is bleaker for school-aged Kiwis, with 8.6 per cent of 15 to 19 year olds being classified as NEETs, roughly even with the OECD average of 8.3 per cent; indicating that school-age New Zealanders are faring less well when compared to international peers than New Zealanders aged 20 and above.[17] Current research indicates that NEETs who don't enter the workforce or move on to tertiary education upon leaving school are more at risk of never entering the workforce.[18] These combined trends create a sense of urgency for policymakers and educators to rethink the role schools play in building career readiness and easing transitions for students.

The New Zealand Government acknowledges the need to focus on the skills gap and

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[10] The level of skill associated with a profession signifies the expected level of education or training required to enter that profession. Ministry of Business Innovation and Employment (2012), pg. 5

[11] Carnevale (2012), pg 10

[12] New Zealand's tertiary attainment rate is fifth highest among OECD nations. OECD (2012c), pg. 37

[13] Between 1991 and 2009, the number of New Zealanders without qualifications fell by 30 per cent and the percentage of the population with bachelor's degrees rose from 8 per cent to 22 per cent. Ministry of Business Innovation and Employment (2012), pg. 3

[14] In its 2013 survey of New Zealand businesses, Deloitte found that 83 per cent of organisations in New Zealand reported that talent shortages are impacting their business results. Deloitte (2013), pg. 4 PwC found similar results internationally, with 58 per cent of CEOs surveyed indicating that an inability to source key skills is impeding growth prospects. The rate of concern among CEOs in the Asia Pacific region, which includes New Zealand, was slightly higher than the international average, at 64 per cent. PwC (2013), pg. 5.

[15] *The Economist*, 27 April 2013 http://www.economist.com/news/international/21576657-around-world-almost-300m-15-24-year-olds-are-not-working-what-has-caused, accessed 21 July 2013

[16] www.oecd.org/els/emp/50305438.xlsx

[17] OECD (2012b), pg. 5

[18] According to research conducted by Bristol University, young people, not in further education or training, who have not entered the workforce by age 23 "face long-term damage to their future wages and employment chances." Britton et. al (2011), pg. 2

has selected "Boosting Skills and Employment" as one the five Better Public Service Targets. Several aspects of this target recognize the role that schools play in boosting skills and employment. More specifically, the Government seeks to increase the number of young people who achieve the Level 2 National Certificate of Educational Achievement (NCEA) by developing "an education system that equips all our learners with skills that allow them to succeed in the 21st century."[19,20] New Zealand's Vocational Pathways are aligned with this goal because they provide direct linkages between what students are learning at school and the skills they will need for future success; and because they are designed to encourage more students to obtain an NCEA Level 2 qualification.

Vocational Pathways provide guidance for students on how to structure an NCEA Level 2 programme so they can explore career interests while building the foundational skills necessary to succeed in further study and future employment. Initially, Vocational Pathways were developed specifically for the seven out of ten Kiwi students not likely to go on to university, however, they have since become broadened to focus on creating meaningful pathways for all New Zealand secondary school students. When I began my Axford Fellowship, the Ministry of Education was preparing to roll out the Vocational Pathways. Over my seven months with the Ministry, I explored the implementation of the Pathways, including the manner in which they were developed, the structures that needed to be in place to support them, and the key challenges to their successful implementation. I also examined ways in which the Pathways could be used to improve outcomes for students by personalising their secondary school experiences and easing their transitions into careers and further study.

To complete my research, I conducted a detailed literature review of issues surrounding youth skills development, vocational education, and personalised learning and a detailed document review of existing materials relevant to the Vocational Pathways. I had conversations, most of them semi-structured interviews, with over 50 individuals who work in areas related to the Pathways in various Ministry of Education departments; at the Industry Training Federation (ITF) and several Industry Training Organisations (ITOs); at Careers New Zealand; with administrators and school leaders at the secondary and tertiary levels; with researchers who focus on vocational training issues both in New Zealand and internationally; and with leaders at business and education advocacy organisations. I also conducted two informal student focus groups, participated in seven working group sessions discussing a variety of topics related to the Pathways and the New Zealand secondary school experience; and participated in two national conferences focused on vocational training and education. To the best of my abilities, I collected evidence from both the North and South Islands and tried to gain insight into the urban, suburban, and rural perspective of identified issues. To maintain the anonymity of sources, I did not cite interviews unless specific data provided at those interviews was referenced.

My report is divided into three chapters. The first chapter provides an overview of the Vocational Pathways and highlights their potential benefits for students and

[19]The NCEA is a three-tiered system of qualifications that students enrolled in secondary schools or secondary school-level programs can earn. Appendix I provides more information on the structure of the NCEA. The New Zealand Government is aiming to have 85% of all 18 year olds earn an NCEA Level 2 or its equivalent by 2017. New Zealand Government (2012), pg 3

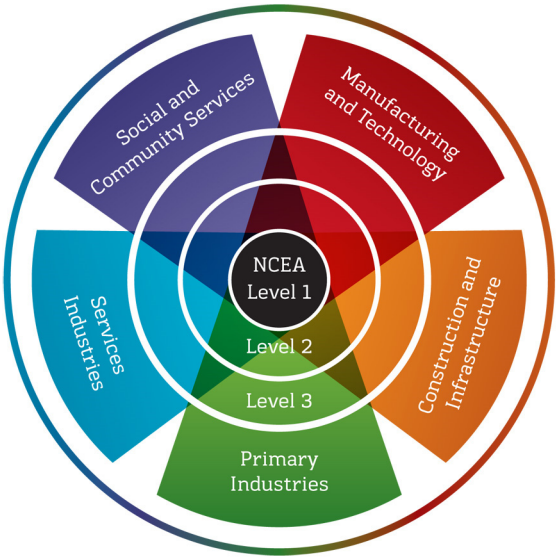
[20] Ibid, pg. 2

employers. The second chapter uses a framework develop by William Eggers and John O'Leary to analyse the implementation of the Vocational Pathways to date and identify suggested steps for the implementation moving forward. The third chapter discusses key challenges to the success of the Pathways with suggestions on how to address those challenges. The report concludes with some recommendations for the Ministry of Education to consider as it moves forward in implementing the Vocational Pathways.

1 VOCATIONAL PATHWAYS IN NEW ZEALAND

On 4 April 2013, the Ministry of Education officially launched the Vocational Pathways to "provide direction and relevance by showing students how their strengths and achievements relate to a wide range of study options and careers".[21] The Pathways cover five industry sectors, as depicted in Figure 1.

Figure 1: The Five Vocational Pathways[22]



Each Vocational Pathway document includes information on the specific industries in the sector; the type of work, including entry-level roles and growth potential that students could expect to find in each sector; the level and type of qualifications students would need to work in specific jobs within the sector; the qualities common to people who succeed and enjoy working in the sector; the competencies employers look for, which are aligned to the key competencies in the New Zealand curriculum; and the role of the sector in the New Zealand economy.[23] The Pathways document also details the recommended NCEA Assessment Standards for each Pathway. Students who earn NCEA Level 2, including meeting NCEA Level 1 literacy and numeracy requirements; and earn 60 recommended assessment standards including 20 sector-related standards from the same sector Pathway will earn a Vocational Pathway Award beginning in 2014.[24] As the Vocational Pathways are foundational, there is significant overlap between the standards needed to gain each one. This overlap gives students the flexibility to explore multiple Pathways as they begin their NCEA studies, without requiring them to specialise early in one particular area.

The theory of change guiding the Pathways is that general education and vocational,

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[21] Ministry of Education Press Release, 4 April 2013, http://www.beehive.govt.nz/release/vocational-pathways-success, accessed 19 July 2013

[22] Appendix II lists the industries included in each Pathway sector.

[23] Each of the five Vocational Pathways documents can be found at http://youthguarantee.net.nz/document-library/, accessed 20 July 2013

[24] Beginning in June 2014, students will be able to request their Vocational Pathway Award from the New Zealand Qualifications Authority (NZQA). Students will be able to access their Vocational Pathways Awards automatically from the NZQA website beginning in January 2015. Ministry of Education and NZQA announcement, July 2013, http://youthguarantee.net.nz/assets/assets/VP-Award-Profile-release-FINAL-June-2013.pdf, accessed 19 July 2013

or career-focused, education can be combined to enable students to develop foundational skills that all employers are seeking. As such, they target several key issues facing young people today. The Pathways address the disconnect students often feel between what they are studying and their futures. They also provide guidance to students on how they might transition into further employment or study opportunities by offering a sector-specific roadmap on what courses and qualifications are needed to enter certain professions and by highlighting the type of skills, both foundational and sector-specific, that employers in those industries expect their new employees to have.

Addressing the Relevance Question

Students, particularly those who are likely to leave school before completing a qualification, often question the relevance of what they are expected to learn in secondary school.[25] In a longitudinal study of 500 New Zealand young people, researchers found that over one third of 16 year olds in the study reported not feeling engaged at school.[26] Participants who had left school at age 16 most commonly reported being bored as their reason for leaving, with many of the male school leavers enrolling in job training or apprenticeships where they reported being happy with their choice.[27] Similar results were found among American students. In a survey of American students who had left school early (i.e. high school dropouts), nearly half reported they had done so because they didn't see the relevance of their studies.[28] Over 80 per cent of early leavers said that more "real-world" or "experiential" learning opportunities could have convinced them to stay on at school.[29]

The Government's Better Public Services strategy acknowledges that Vocational Pathways were explicitly developed to address the relevance issue, stating that in order to achieve its NCEA Level 2 goal, the Government will "strengthen the relevance of qualifications for young people through the implementation of vocational pathways, skills based learning and stronger linkages and networks between schools, other providers and employers."[30] Vocational Pathways make it clear to students how their studies relate to future options by providing direct linkages between the credits students are earning and future job prospects.

There are tangible benefits to making it clear to students how their learning is relevant to future options, with studies highlighting the positive impacts that career-focused or vocational education has on student engagement, persistence, performance and completion. In Massachusetts, home to a vocational education system known in the United States as the "Cadillac of Career and Technical Education (CTE)", students enrolled at vocational high schools were less likely to drop out of school and more likely to pass the state's rigorous high school leaving exam than their peers in comprehensive high schools.[31,32] Similar results were found in Chicago, California,

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[25] Claxton (2008), pg. 27-28
[26] Wylie, et. al (2008), pg. 19
[27] Ibid, pg. 20-21
[28] Bridgeland (2006), pg. iii
[29] Ibid, pg. iv
[30] New Zealand Government (2012), pg. 9
[31] In Massachusetts, vocational education is delivered in a single school model where students typically alternate between spending a week focusing on academic subjects and a week focusing on their selected vocational subjects, with integrated curriculum between the two groupings of courses. Students choose to attend these schools instead of their local comprehensive high school. Vocational

and Michigan.[33,34,35] There was also clear evidence of the benefits of vocational education beyond secondary school, in both further training and future earnings.[36,37] There is early evidence that Vocational Pathways are already having the same impacts for New Zealand students. Papakura High School in Papakura just south of Auckland was an early adopter of Vocational Pathways and school leaders reported nearly a 10 per cent increase in daily attendance and 70 per cent reduction in daily truants since implementing the Vocational Pathways.[38]

Creating a Student-Centred Environment

By highlighting different ways students can structure their secondary school programme, Vocational Pathways also move secondary education in New Zealand closer to one of the original goals of the NCEA, which was to create alternative options for students beyond the traditional university or vocational track.[39] While some schools used the freedom of the NCEA to create multiple pathways, more often than not, students approached the NCEA through the bounds of entire courses rather than individual standards and schools continued on the existing two-track model.[40,41] Students interviewed consistently reported that their schools focused almost exclusively on the university pathway, to the exclusion of other options, which most students said was dispiriting.[42] Funnelling students into university or non-university groupings runs counter to the approach suggested by research, which has found that by the time students reach secondary school they are eager to design their own learning pathway, one that will allow them to explore "real" issues related to their future goals.[43]

Shifting to a multi-pathway approach provides more options for students to take

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high schools had average drop-out rates that were one-half that of the comprehensive high school average, with dropout rates at regional vocational schools averaging one-third the comprehensive high school average. Fraser and Donovan (2013), pg. 1

[32] Pathways to Prosperity (2011), pg. 27

[33] In its 2012 analysis of the tri-state area surrounding Chicago, the OECD noted that the twenty per cent of students enrolled in Career and Technical Education (CTE) in the Chicago Public Schools had higher graduation rates than their peers not enrolled in CTE programs, with similar results for students in nearby Milwaukee. OECD (2012b), pg. 10

[34] In California, students enrolled in career academies were more likely to finish high school. Career academies provide a "school within a school" model where students are enrolled simultaneously in college preparatory academic classes and career-focused technical classes. Students enrol in the academies in small cohorts who complete all coursework together and participate in career-focused activities including internships, job shadowing, and field trips. Kemple (2008), pg. 8

[35] In Michigan, students at risk of dropping out were eight to ten times less likely than their peers to drop out or to miss or fail classes if enrolled in a vocational education program. Kulik (1998), pg. 7

[36] In Massachusetts, over 60 per cent of students enrolled in vocational programs went on to post-secondary education (including both bachelor's degree programs and associate's degree programs, with many more enrolling in post-secondary training. Fraser and Donovan (2013), pg. 2

[37] California career academy graduates saw sustained earnings gains of eleven per cent annually when compared to their peers who did not attend career academies. Kemple (2008), 5

[38] Author interview, 19 March 2013

[39] Wylie, et al. (2008), pg. 23

[40] Wylie, et al. (2009), pg. 20

[41] Wylie, et al. (2008), pg. 24

[42] It should be noted that students interviewed were all enrolled in career-focused education programmes, so their opinions are not likely to be representative of all New Zealand students. Their backgrounds spanned socioeconomic and ethnic groups.

[43] Claxton (2008), pg. 94

responsibility for choosing their own secondary school path and incorporating foundational literacy and numeracy skills into those pathways ensures that students' future options aren't limited due to inferior academic skills. Schools and systems that have moved to a multi-pathway, personalised learning approach at the secondary level have seen increased student engagement and improved student performance. After redesigning their high school program to a competency-based, personalised model where each student worked with teachers and family members to develop an individual pathway, the State of New Hampshire found that students became more engaged because they felt more in control of their learning. Schools were also able to drastically reduce their dropout rates, with many schools eliminating dropouts entirely.[44] Further, pathways coupled with strong career education, have been shown to raise student aspirations and improve chances of future academic success.[45] Kiwi students enrolled in early versions of the Pathways reported new career interests and a deeper understanding of further study options as a result of their enrolment in the Pathways program. Personalised approaches do not necessarily mean that students need to have free rein to choose any credits they desire, but rather that individual schools or networks of schools can use the Vocational Pathways to create approaches to learning that meet the unique needs of their students and allow them to pursue personalised paths.

The Vocational Pathways are also part of the broader Youth Guarantee initiative, which is focused on meeting the Government's NCEA Level 2 target, increasing the delivery options through which students may achieve NCEA Level 2 qualifications, and improving transitions between secondary and tertiary schooling.[46] The Pathways provide an overall framework for planning an NCEA Level 2 qualification across training providers, so they can be used to ensure consistency across other aspects of Youth Guarantee, including Trades Academies. Trades Academies are full-time programmes for senior secondary students (Years 11-13) that include both secondary and tertiary components and allow students to earn both an NCEA Level 2 qualification and a trades-related tertiary qualification. Courses at both the secondary and tertiary levels can be delivered by a range of providers. In most instances, students attend academic courses at their secondary school while travelling to a tertiary institution for sector-related courses.

Trades Academies are similar to the early college high schools being opened in several American cities. Early college high schools, including Early College STEM Schools in Chicago[47] and Pathways in Technology Early College High Schools in New York City,[48] offer students the option to stay on two years after completing their high school diplomas to earn a 2-year tertiary qualification. In both of these school programmes, students follow a technology learning pathway, gaining practical skills in areas such as computer programming or networking as they complete their high school coursework and transitioning seamlessly into tertiary education.

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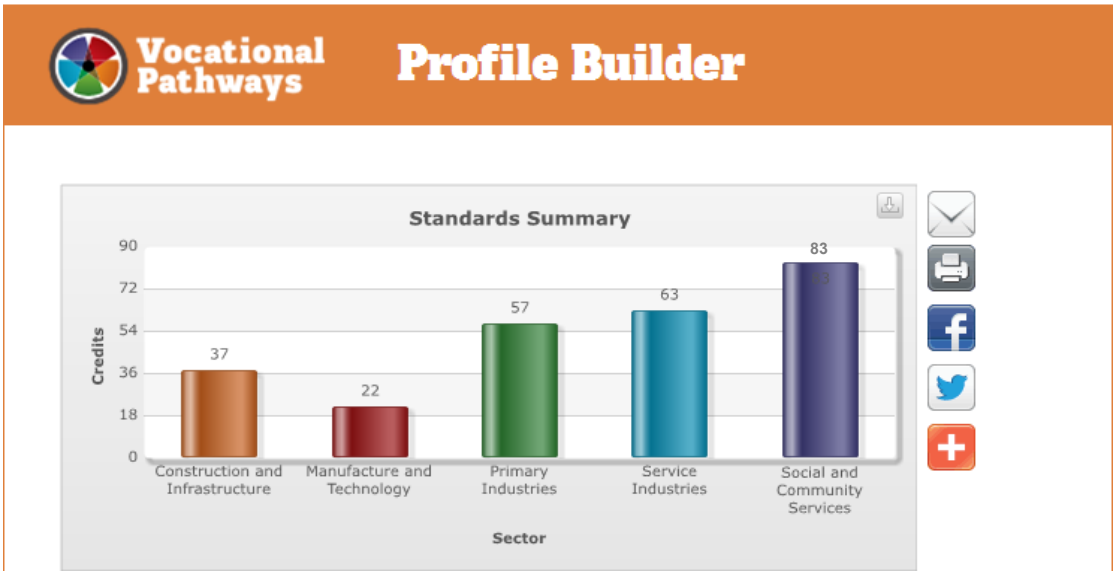
[44] New Hampshire Department of Education (2005)
[45] Balaram and Crowley (2012), pg. 4
[46] Appendix II provides more information on the components of the Youth Guarantee initiative.
[47] Information on the Early College STEM High Schools in Chicago can be found here - http://www.cps.edu/Pages/ECSS.aspx, accessed 19 July 2013
[48] Information on Pathways in Technology Early College High Schools (P-TECH) in New York City can be found here - http://www.ptechnyc.org/site/default.aspx?PageID=1, accessed 19 July 2013

Developing a Common Language

The lack of a common language between the education and business communities is one of the central disconnects in building an education system that graduates students who have the skills employers need. Although they often have the same end-goal in mind – producing students with the personal, academic, and technical skills to become successful adults – educators and business leaders often talk past one another when discussing how to build an education system that helps young people build those skills. Because all stakeholders were involved in their development, the Vocational Pathways are crafted in a way that speaks to both educators and business people. On the one hand, educators can see how a student might use a Pathway to build his or her plan for completing NCEA Level 2. On the other hand, an employer knows that if a student followed a Pathway to earn an NCEA Level 2, he or she completed standards of use to employers in that sector. The Pathways provide educators and employers with the same context to discuss a student's career-related development.

Most powerfully, however, the Pathways translate the NCEA in a way that makes it less confusing for students, families, and future employers. Despite having been rolled out over ten years ago, the NCEA is still confusing for many students and families to navigate and is, in many instances, a complete unknown for future employers.[49] The profile tool that accompanies the Pathways provides an innovative and simple way to visualise how credits, either earned or planned, map onto the five Pathways. Using the online tool, a student can enter his or her earned standards to see whether he or she is on the way to satisfying the requirements for a particular Pathway or to see whether his or her curricular interests map to a particular Pathway. After each standard is entered the tool creates a bar chart that highlights how many of them fit into each Pathway, with the colour of each bar corresponding to the colour of each Pathway. Figure 2 below provides a sample of what a student's bar chart might look like.[50]

Figure 2. Sample Vocational Pathways Profile Builder Bar Chart[51]



[49] Hipkins (2013), pg. iii and author interviews

[50] Because there is overlap among the Pathways, students often earn credits across Pathways as indicated in Figure 2.

[51] The profile builder tool can be retrieved from http://youthguarantee.net.nz/vocational-pathways/profile-builder/.

Formal bar charts produced by the New Zealand Qualifications Authority (NZQA), the agency that monitors and certifies qualifications achievement throughout New Zealand, will also be included with a student's NCEA certificate. Students can share this official bar chart with prospective employers to show that they've developed skills that are of value to employers in that sector. Business leaders who have seen the bar chart have indicated that the simple and straightforward depiction of a student's qualifications makes it easier for an employer to determine the types of skills a student would bring to the job and also makes it easier to understand NCEA qualifications from a workplace perspective.

This broadened understanding has the potential to increase business to education partnerships, as well, by making it clear to employers how secondary school programmes relate to the work they do. The OECD has noted that "[e]mployers are more likely to provide education and training if they understand...the system as it's designed."[52] Employers are also more likely to support and participate in educational activities at secondary schools if they can see value in the programme.

[52] OECD (2012a), pg. 11

2 ENSURING THE SUCCESS OF THE PATHWAYS

In *If We Can Put a Man on the Moon,* a comprehensive study of the common failures in public sector implementation, Bill Eggers and John O'Leary identified the following factors as being key to "the journey to success" for public sector projects:

1. The undertaking must start with a good idea
2. The idea must be given specifics
3. The design must win approval
4. There must be competent implementation
5. The initiative must generate desired results
6. For long run success, what is being done and how it is being done must be continually re-evaluated[53,54]

I used this framework to analyse the implementation of the Vocational Pathways, determine risks, and identify things to think about as the implementation moves forward. As I was conducting my research, the Pathways had not been fully implemented and therefore part of my analysis focuses on steps I believe the Ministry should take to ensure the Pathways are a success.

Starting with a "Good Idea"

Neither the idea of providing vocational training in secondary schools nor the idea of creating pathways for students to move seamlessly from study into careers is new in New Zealand. Schools with a focus on teaching skills for particular industries were first opened in the late 1880s and the first official vocational or technical schools opened after the passage of the Manual and Technical Instruction Act of 1902.[55,56] For a variety of reasons, technical schools slowly fell out of favour, nearly disappearing by the early 1960s when tertiary polytechnic institutes and regional technical institutes took over the bulk of vocational training.[57] The idea of creating seamless pathways through the education system were central to the Ministry's strategy of the early 1990s, which "envisage[d] a seamless education system in which barriers no longer exist between schools and post-school education and training", noting that such a system "can maximise participation and achievement in education and training, from birth throughout life."[58]

The current iteration of these two strategies, the Vocational Pathways, came about as a result of two complementary events, the first being the implementation of NCEA

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[53] *If We Can Put a Man on the Moon* synthesizes the lessons learned from seventy-five international case studies on large public sector initiatives identifying the steps and actions that make the difference between a project's success and a project's failure. The framework was selected to guide the analysis of the Vocational Pathways implementation for several reasons: 1) the framework was developed from a "real world" perspective and therefore focused on approaches that are both achievable and relevant for public sector projects of a variety of type and size and in a variety of contexts; 2) several of the case studies explored in depth involve making systemic changes to the manner in which education is delivered, making it highly relevant to the Vocational Pathways; 3) it was published in 2009 and therefore reflects current circumstances in the public sector, including financial constraints.

[54] Eggers and O'Leary (2009), pg. 26 (electronic version)

[55] Nicol (1940), pg. 34-35

[56] Commission on Education in New Zealand (1962), pg. 379

[57] Ibid, pg. 381-383

[58] Ministry of Education (1994), pg. 6

qualifications in secondary schools and the second being the identification of a need for clear, consistent learning pathways that reflected the skills needs of industry. As discussed previously, one of the goals of the NCEA was to create the flexibility necessary for students to develop their own pathways through secondary learning. Without definition, however, many schools and many students lacked the capacity and tools to build those pathways. This was particularly concerning for students choosing to follow a more vocationally oriented pathway, whose NCEA qualifications, in the absence of guidance, lacked coherence.[59]

In response to these issues, the Industry Training Federation (ITF), an organisation that advocates for better policy and practice in workplace learning and skill development, conducted an analysis of the number of industry-specific standards that were being achieved by students in secondary schools, finding that in 2009, 37 per cent of all New Zealand secondary school students were achieving one or more industry standard.[60,61] The ITF further grouped these earned standards by sector, noting that most earned standards fell into five specific categories. These categories would become the five Vocational Pathways: 1) manufacturing and technology; 2) construction and infrastructure; 3) primary industries; 4) social and community services; 5) service industries.[62] The ITF then approached the Ministry with the idea that the two entities partner to create pathways aligned with industry sectors. Initially, sector-specific qualifications outside of the NCEA framework were considered, but it was decided that trying to incorporate additional qualifications into secondary school would create fragmentation and would not fit neatly into the existing school context. The ultimate decision was that these pathways should be used as an overlay for the existing NCEA framework.

There are several characteristics that make the Vocational Pathways a "good" idea from a policy standpoint. Firstly, they were designed to build on existing government policies and within existing government frameworks. That is, developing the Pathways would create the guidance that was necessary to achieve one of the original aims of the NCEA, to create multiple pathways for students to navigate secondary school. Secondly, they could be used to enhance existing school qualifications (i.e. NCEA) instead of creating a new and duplicative approach. Thirdly, they could be used to address an existing government priority. By creating more options for students to complete an NCEA Level 2 qualification, the Pathways could be used to address the Government's Better Public Services Target that 85 per cent of 18 year olds achieve NCEA Level 2 by 2017. Fourthly, the idea to create them was driven by key stakeholders rather than policymakers. The ITF's members, the Industry Training

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[59] Education Review Office (2013), pg. 22-23

[60] The Industry Training Federation (ITF) is an ITO membership organisation that advocates on behalf of all Industry Training Organisations (ITOs) for better policy and practice in industry skill development and workplace learning. ITOs were created in 1992 by the Industry Training Act to serve the following purpose: "setting national skill standards for their industry; providing information and advice to trainees and their employers; arranging for the delivery of on and off-job training (including developing training packages for employers); arranging for the assessment of trainees and; arranging the monitoring of quality training" for their respective industries. Each ITO is officially "recognised" (i.e. approved to operate) by the government, with recognition being reviewed and approved every five years. Currently, there are nineteen recognised ITOs and one additional training organisation that develops qualifications and standards serving industries that employ 75 per cent of the workers in New Zealand. Appendix III provides information on the ITOs and which industries they serve.

[61] Ministry of Education internal documents

[62] Appendix II lists the industries in each Vocational Pathway.

Organisations (ITOs) are entities that set the standards for training in their respective industries. Their understanding of leading industry training practices makes them well placed to design the strategy for implementing industry training at a secondary school level. Their strong relationships with business leaders in their sectors also give them insight into the types of skills employers in those sectors are looking for. Finally, as leaders in industry training, their buy-in to the Vocational Pathways is critical to their success.

Developing "the Specifics" of the Vocational Pathways

Some specifics of the Vocational Pathways had been developed by the ITF prior to their approaching the Ministry of Education. They combined their analysis of student completed standards with their understanding of the industries served by existing ITOs to finalise the five Pathway sectors. In addition, some ITOs had already begun working together to identify common skills and competencies across the industries in those sectors. In late 2010, the Ministry formalised the development of the Vocational Pathways by establishing the Pathways Advisory Group (PAG), a cross-sector group whose members represented each of the primary stakeholder groups including educators, ITOs, business leaders, academics, cultural organisations, and a variety of government entities.

The PAG worked together to create the following:

- **Identifying sector-specific standards for each Pathway** – The PAG established sector consortia, composed primarily of ITOs, to review existing NCEA and industry standards and determine the standards that all industries in each sector would expect entry-level employees to exhibit.
- **Developing comprehensive definitions of each Pathway** – The sector consortia also developed clear definitions of each Pathway, including the industries included in each sector, the roles and opportunities available in each sector, the nature of the work in each sector, and key competencies in each sector
- **Identify foundational skills for all Pathways** – To ensure that each Pathway provided foundational skills, the PAG decided that all Pathways would require foundational literacy and numeracy skills. At the same time as the Pathways were being developed, the NZQA was launching new literacy and numeracy requirements for NCEA Level 1. The PAG ultimately decided that these Level 1 requirements would also be required for all Vocational Pathways.
- **Determine the requirements for earning a Vocational Pathways Award –** The PAG determined how many standards students would have to earn to have a Vocational Pathway recognised on their official New Zealand Qualifications Framework Record of Achievement. The group also decided on the timing of those awards, taking into consideration the launch of the Vocational Pathways themselves and the time schools would need to make them available to students.

All of these details were incorporated into five Vocational Pathways documents that were developed in draft form in 2012 and circulated for review with educators, industry trainers, and PAG members. Feedback from that review process was incorporated into the final Vocational Pathways documents that were released on 4 April 2013.

Going forward, the PAG is focusing its efforts on additional aspects of the Pathways including:

- **Developing implementation supports** – The PAG is working with internal stakeholders, including the NZQA, and external providers to develop tools that schools can use to implement the Vocational Pathways, such as assessment guidelines and teaching tools.
- **Creating Pathways requirements for NCEA Level 3** – While initial efforts were focused on developing foundational Pathways at NCEA Level 2, the intention is to develop Pathways for students studying at the more advanced NCEA Level 3. Creating NCEA Level 3 Pathways will serve several aims: to further create a seamless transition between secondary school and tertiary studies; to create more advanced Pathways that can be consistently delivered across schools and training providers; to mitigate risks that Vocational Pathways are seen as only for students who will not progress beyond the NCEA Level 2 qualification. Some thinking has been done around what NCEA Level 3 Pathways look like, but much of the development of NCEA Level 3 Pathways remains to be completed.
- **Exploring new Pathways options** – At the request of industry leaders and students, the PAG has begun developing a sixth Vocational Pathway in Creative Industries. This Pathway will include industries such as performing and visual arts, entertainment, design and architecture and is expected to be completed in June 2014. The development of the Creative Industries Pathway points to further opportunities for the PAG, both the development of new Pathways to meet identified needs and the revisiting of existing Pathways to ensure they are still relevant.

In addition to the PAG's efforts, Ministry staff are also working to compile case studies of early adopters and to develop additional guidance for schools to use in implementing the Pathways. The Ministry has also incorporated the Pathways into other work, notably the Youth Guarantee Networks that are part of the Youth Guarantee initiative. The Youth Guarantee Networks will be discussed in more detail later in this chapter.

Taking a cross-sectoral approach to designing the "specifics" will benefit the Vocational Pathways in the long run because the PAG was able to raise many issues that may not have been considered if the Ministry were developing the Pathways on its own. Most notably, the driving influence of the ITF and ITOs ensured that employer and industry needs were taken into account. This is important because industry credibility will be key to success for the Pathways. If employers don't find the Pathways useful because they don't see improvement in the preparedness of students earning them, the Pathways aren't meeting their goal of helping students to develop skills that will improve their future opportunities.

In addition, the inclusion of educators on the PAG ensured that issues of importance to schools were considered. There are still school-based concerns that were not addressed during the design process, including how schools should go about implementing the Pathways. Considerable confusion, which will be discussed further in Chapter 3, seems to exist among stakeholders as to what is expected of schools. Different stakeholders seem to have differing views on how the Pathways should be implemented, with some seeing the need for contextualised learning in order to achieve full impact and others seeing the Pathways as simply a document for students

to select courses, not requiring schools to make any changes at all. Similarly, some stakeholders believe that partnerships between tertiary providers and schools are essential to the implementation of the Pathways while others believe that schools can and should be able to create self-contained Pathways models. These tensions highlight a risk that has not been fully addressed in the design phase. Essentially, all schools should choose the approach that best meets the needs of their students. However, that assumes that all schools have the understanding, capacity, and resources to implement Vocational Pathways even in their most basic form. Without additional guidance and clear expectations, schools may struggle to successfully implement the Pathways

Eggers and O'Leary would say that not properly exploring these issues through scenario planning can undermine an implementation process.[63] They note that primary weaknesses in the design process include, "overoptimistic assumptions, the lack of planning for alternative scenarios, the failure to submit the design to rigorous scrutiny", and that these weaknesses can lead to an "implementation nightmare."[64] Going forward, the PAG should consider convening consortia of educators and trainers who have already implemented Vocational Pathways together with educators and trainers who have not done so, to identify and mitigate issues schools might face in implementing the Pathways. The findings of the consortia can inform the implementation process and identify ways to enhance the Pathways or support schools more effectively. As will be discussed, some of these issues are being explored through the Youth Guarantee Networks, so any role the PAG plays in scenario planning or knowledge gathering should be coordinated with the work done by the Networks.

Gaining Approval for the Vocational Pathways

In *If We Can Put a Man on the Moon*, Eggers and O'Leary limit their discussion of winning approval to gaining approval from government officials, specifically elected officials. While Cabinet approval is essential for the Ministry to proceed with any programme, the success of many government programmes, including Vocational Pathways, is highly dependent upon stakeholder approval as well.

The first phase of approval was securing Ministerial approval for the Vocational Pathways themselves and the plan for development and implementation. This approval process followed standard procedures with initial approval granted before the Ministry partnered with ITF to begin formal development. Ministry staff briefed Hekia Parata, Minister of Education and Steven Joyce, Minister of Tertiary Education, Skills and Employment throughout the process before the Vocational Pathways were formally launched by both Ministers on 4 April 2013.[65]

The second phase of approval needed to proceed with the Vocational Pathways is approval from the stakeholders who will have to implement the Vocational Pathways. This approval process might not be formally required for the Pathways to proceed, but will be vital to their successful implementation. Actively involving stakeholders in the Pathways development process was an essential first step along the path to building

[63] Eggers and O'Leary (2009), pg. 74 (electronic version)
[64] Ibid, pg. 74
[65] It should be noted that when the Vocational Pathways were first initiated in 2010, Anne Tolley was the Minister of Education. Consequently, she, not Hekia Parata, was briefed on initial stages of development, until the latter was appointed Minister of Education in December 2011.

the buy-in necessary for implementation. Educators have already indicated their approval for the Pathways. Many schools, industry training providers (ITPs), private training establishments (PTEs), and polytechnics have already begun incorporating them into course offerings.[66] The ITF, ITOs, and the Ministry should continue to develop support and incentives for providers, while also working with other stakeholders, including the Ministry of Business, Innovation and Employment (MBIE) to ensure that industry leaders buy-in to the Pathways as well.

Because New Zealand schools are self-governing, any implementation of the Pathways will be voluntary. Education leaders involved in the PAG process expressed reservations that the Pathways implementation timeline did not allow schools enough time to properly implement them. School leaders also reported that competing priorities, lack of continuity at the Ministry, lack of advocacy from the Ministry, and funding were seen as obstacles to successful implementation. Others expressed reservations due to a lack of clarity about what is expected during the implementation phase. These concerns do not mean the Ministry should halt its timeline for the Vocational Pathways, but Ministry officials should provide some reassurance to schools that their concerns will be addressed, give more detail on the expectations for Vocational Pathways going forward, and carefully map out the way that Vocational Pathways will be incorporated into other government programmes, both those run by the Ministry and those run by other government entities.

Competent Implementation of the Vocational Pathways

Implementation of the Vocational Pathways is largely going to come under the implementation of Youth Guarantee. Youth Guarantee is an overarching strategy to improve NCEA Level 2 achievement and bring coherent focus to the many programmes for secondary school learners. Youth Guarantee's vision is to "transform the educational system at the secondary-tertiary work interface to enable all young people to achieve NCEA Level 2 or equivalent and progress to further education, training and work for all young people 15 – 19 years old."[67]

The Youth Guarantee has a detailed implementation plan with outcomes and aims that highlight the priority of the Vocational Pathways. For example, the aims of the Youth Guarantee are as follows:

> "To ensure that all learners will have more choices, ways and places to achieve NCEA Level 2 and pathways into further learning and work.
>
> Foundation level vocational learning and skills development is a core function in the senior secondary school at the secondary-tertiary interface. Relevant learning context and programmes will ensure the curriculum and work place training is complementing vocational learning, training and pathways to create a 'foundation framework' across the secondary tertiary interface.
>
> [Students] will be better informed and able to make more informed decisions on what they want to learn and where they want to learn. Innovative local

[66] Beginning in 2014, the Tertiary Education Commission will require that all Secondary Tertiary Programs, including Trades Academies, and all Level 1-3 tertiary education programmes be aligned to the Vocational Pathways. ITPs and PTEs typically offer Level 1-3 tertiary programmes. Tertiary Education Commission (2013), pg. 5

[67] Ministry of Education (2013a), pg. 1

models, partnerships, networks and provision will meet local and regional needs, for the benefit of all learners, through the foundation framework and secondary-tertiary programs."[68]

The Ministry sees the Youth Guarantee Networks as the primary mechanism for Vocational Pathways implementation. Youth Guarantee Networks are partnerships between schools, tertiary education providers, and training organisations focused on developing a collaborative approach to increasing NCEA Level 2 achievement rates in their communities. Members of each Youth Guarantee Network sign a non-binding Memorandum of Understanding (MOU) which outlines the terms for network participation, including the agreement to share data and materials, make necessary organisational changes, and incorporate community needs into the development of new learning opportunities for students, including the Vocational Pathways.[69] The current focus areas for Youth Guarantee Networks are to:

- develop learner-centred design principles that reflect the unique needs of the community;
- determine the contribution of the Network to the local community in the next three to five years;
- prioritise which Vocational Pathways the Network will focus on and how those Pathways meet local and regional needs;
- identify key audiences for the programme and develop plans for engaging those audiences; and
- create a high-level programme map that will ensure that foundational programmes, like the NCEA Level 2 qualification, lead to further study.[70]

There are several risks associated with developing educational programmes across providers. From an academic perspective, the risks are that tertiary and industry training providers do not have a strategic understanding of foundational education and schools don't have a strategic understanding of vocational education. The Networks attempt to address these risks by creating a formalised structure for providers of multiple types to work together. Initially, the Networks are being facilitated by the Ministry with the intention that providers will ultimately assume control of the work of the Networks.

There are currently 21 existing Youth Guarantee Networks with additional networks expected to be created in the coming year. The vision for these Networks is that they will ensure significant breadth of robust traditional and vocational pathways in all communities to enable student choice and that they create learning opportunities that reflect the diversity of all learners.[71] The implementation plan includes an extensive change management strategy, acknowledging that policy changes and systemic changes will need to be made to accomplish the ambitious goals of Youth Guarantee. The Networks have begun largely by focusing on bringing different providers to the table, but the Ministry has a plan for bringing employers and business leaders into the process. This plan involves working with industry leaders, business advocacy groups,

[68] Ministry of Education (2013a), pg. 3
[69] A template Youth Guarantee Network Memorandum of Understanding is included in Appendix IV.
[70] Author Interview, 17 July 2013
[71] Author Interview, 25 March 2013

and employers to develop strategies for building skills in their individual communities.

According to Eggers and O'Leary, competent implementation requires the following components: 1) a clear project owner; 2) management continuity; 3) involving designers in the implementation; 4) a dedicated team to staff the project; 5) active management of expectations; 6) sufficient time and resources for implementation; 7) allowing 'naysayers' to have their say; and 8) detailed scenario planning, including planning for worst possible outcomes.[72]

Overall, Youth Guarantee demonstrates a substantial level of competence using this framework. Most of these criteria are met at the Ministry level, but may not be met by individual Network participants. Networks are being used as the primary mechanism for implementing Vocational Pathways and Network members are expected to become the primary facilitators of the Networks. Therefore, not providing them with adequate support to develop the components needed for competent implementation could pose significant risks.

With regard to component 1, Youth Guarantee and therefore Pathways implementation has a clear project owner at the Ministry level. However, each Network is currently working to develop clear ownership. Because the intent is that the Networks will largely drive implementation of the Pathways and because MOUs governing Network participation are non-binding, Ministry staff should continue monitoring Network progress to ensure each Network develops proper ownership and accountability structures. Relying on Networks for implementation could also pose risks for component 2, management continuity because the participants on the Youth Guarantee Networks could change over for a variety of reasons including management at the individual entities involved in each Network or parties becoming less actively involved as the Networks move forward.

For component 3, involving designers in implementation, Youth Guarantee leaders were key members of the PAG demonstrating management continuity from the design phase and ensuring that staff involved in the development of the Vocational Pathways are also involved in the implementation via the Networks. In addition, the same stakeholder groups that were involved in the design of the Pathways are also represented on the Youth Guarantee Networks building additional continuity. The Ministry satisfies component 4, having added a dedicated team of resources both at the national office in Wellington and at regional offices throughout New Zealand to manage the Networks. It is unclear, however, if the Network participants themselves are receiving resources to allow them to dedicate staff to implementation, potentially complicated the risk identified above.

The Ministry team has developed a detailed communications plan that acknowledges multiple audiences, indicating the ability to address component 5, managing expectations. Ministry staff are taking an active role in managing expectations with Network participants, but as discussed previously, schools and providers lack clarity on what is expected of them during the implementation phase. The Ministry has allocated funding and developed a detailed implementation plan that indicates sufficient time and resources at the Ministerial level, addressing component 6. However, the level of resources provided to Network participants seems to be limited

[72] Eggers and O'Leary (2009), pg. 134 (electronic version)

to in-kind support from Ministry staff to facilitate the Networks, funding to cover the cost of convening Network meetings, and materials such as sample models to frame discussions. As with all public sector agencies, additional funding is often limited, but the lack of any additional resources, financial or otherwise, for Network participants poses a risk to implementation since they will largely be responsible for implementing the Pathways.

The collaborative work of the PAG in designing the Pathways ensured that all voices, including naysayers were heard, satisfying component 7. The implementation plan identifies risks, indicating that some scenarios have been considered, but it is unclear if the detailed scenario planning envisioned in component 8, including planning for worst possible outcomes were carried out. One potential risk is that industry leaders have not yet been fully incorporated into the process. The reasoning behind not incorporating industry leaders at this stage is to allow education providers to develop the tools needed for implementation before presenting them to industry. As discussed previously, industry support and buy-in is key for the success of the Pathways, and therefore, the Ministry should ensure that excluding them from the early development phases will not impede the success of the Pathways. In particular, Networks should be careful to develop tools that reflect the common language and cross-sectoral needs that were reflected in the PAG's design process.

However, a bigger risk to the successful implementation of the Pathways is that it relies so heavily on the capability and commitment of Network members, all of whom will be participating voluntarily. Eggers and O'Leary warn that the biggest danger during the implementation phase is the "Overconfidence Trap", the "unrealistic optimism" that everything will fall into place.[73] The Youth Guarantee team at the Ministry level should focus on developing scenario plans that consider what might happen if Networks are unable to develop the expected capacity or if Network members decide to reduce or cease participation. This will be particularly challenging due to the inconsistencies in information and expectations around the Pathways, which will be discussed further in Chapter 3.

Generating Desired Results from the Vocational Pathways

There are two challenges central to achieving results in initiatives such as the Vocational Pathways. The first is clarity around what the desired results actually are and the second is navigating the variety of competing interests and priorities inherent to a project that involves such a breadth of stakeholders.

The Ministry has proposed detailed monitoring for Youth Guarantee, focused specifically on the Better Public Services NCEA Level 2 target. The plan proposes several measures that capture some of the impact of Vocational Pathways, including student retention in education, achievement of NCEA Level 2 qualifications, progression into tertiary study and employment, and sustainable change to the education system that empowers both learners and employers.[74] The plan also proposes to track cohorts of students in order to determine how the impacts of Youth Guarantee change over time.[75] The Ministry compiles several data sets that could be useful in tracking these metrics, including data on student transitions out of school or

[73] Eggers and O'Leary (2009), pg. 134 (electronic version)
[74] Ministry of Education (2013b), pg. 3
[75] Ibid, pg. 4

to tertiary studies and student employment outcomes. However, these data sets have limitations. Student transitions data collected by the Ministry would have to be aligned with student qualifications data collected by NZQA in order to isolate transitions information for students enrolled in Youth Guarantee programmes generally or Vocational Pathways specifically, while data on student employment is derived in part from tax data, resulting in a lag before those metrics can be calculated.

Because the Youth Guarantee includes several programmes, it would also be difficult to determine the impact of Vocational Pathways using general measures. The Youth Guarantee monitoring plan indicates that the individual components of the programme, including Vocational Pathways will be monitored separately, but does not specify what other measures or methods might be used to monitor the impact of the Pathways. The next section on continual re-evaluation provides some suggestions on data that could be used to analyse the specific impact of the Pathways.

Beyond the data considerations around quantifying programme results, Eggers and O'Leary note that achieving results in the public sector is particularly difficult when dealing with "the pretzel organisation", that is, any large bureaucratic organisation with multiple stakeholders, all with evolving missions.[76] Not only does the success of the Vocational Pathways require navigating the systems of multiple government agencies, but also convincing stakeholders, each of whom have their own unique cultures and may not operate entirely under the authority of the Ministry that Vocational Pathways are worth the time and effort.[77] This situation presents multiple "pretzels" thereby posing great risk to the impact of Vocational Pathways. The Youth Guarantee implementation plan foresees these risks, but as mentioned above does not indicate that scenario and contingency planning were conducted to prepare for their impact. In addition, the lack of clear incentives to encourage participation further jeopardises the Vocational Pathways. Achieving results is perhaps the most vulnerable aspect of the Vocational Pathways implementation. Incomplete data and a lack of clear incentives for stakeholders to cooperate pose challenges to achieving the goals of the Vocational Pathways and should be carefully considered as part of the implementation process.

Continuous Re-evaluation of the Vocational Pathways

Although assessing results provides an end goal for implementation, Eggers and O'Leary caution that stopping at results could prevent long-term effectiveness of the programme. They state that "[o]nce the program is in place…a continuous re-evaluation becomes critical to ensure that the program[me] still makes sense and that complacency doesn't set in."[78] They note that the "complacency trap" is particularly common in education because of the variety of barriers in place to maintain the status quo and because education reform typically focuses on making the current system work, rather than changing the system entirely.[79] Both Youth Guarantee and the Vocational Pathways are dependent in many ways on changing the current manner in which secondary education is delivered and therefore, are fighting an uphill battle

[76] Eggers and O'Leary (2009), pg. 154 (electronic version)
[77] Eggers and O'Leary identify culture as a particularly challenging thing to navigate in order to achieve results. New Zealand's self-governing school culture means that each school is an independent actor, complicating the implementation of any new program. Ibid, pg. 143 (electronic version)
[78] Ibid, pg. 167 (electronic version)
[79] Ibid, pg. 167 (electronic version)

against agency complacency and resistance to change.

There are several aspects of Vocational Pathways that should be revisited continually to ensure that the Pathways are still meeting their goals of creating a system that allows students to move seamlessly through education and into the workplace and meet the needs of employers by enabling students to build skills that employers value. The questions below highlight some aspects of the Pathways that could be enhanced by continued assessment.

- **Are the Pathways continuing to meet students' needs?**

  With the proper guidance, students will only select Pathways that help them to achieve their goals and aspirations. The Ministry can use data on Pathways completion and future employment trends for students earning the Pathways to determine both student interest and the impact Pathways have on student outcomes. These findings should be used to determine the continued relevance of each Pathway for students. Pathways with either limited student interest or limited evidence of impact on improving student outcomes should be revised or replaced.

- **Are the Pathways continuing to meet employers' skills needs?**

  Because they were informed by an analysis of student data, the five sectors that currently comprise the Vocational Pathways reflect standards students were earning in secondary school. Therefore, they were driven by the supply of skills created by secondary schools and not by the true demand for skills from industry. Future iterations should incorporate the demand for skills by developing an assessment of the skills employers are looking for and overlaying those needs on the current Pathways, removing standards from the Pathways that no longer reflect a sector need and adding, to the best extent possible, standards corresponding to skills employers are seeking that are not reflected in the current Pathways.

- **Do the Pathways target identified national needs?**

  Existing Pathways sectors should be reviewed against industries that have been identified by the Ministry of Business, Innovation, and Employment (MBIE) as either poised to grow or in danger of stagnating due to skills shortages. Many pathway programs in the United States focus on Science Technology Engineering and Math (STEM) because those skills have been identified as particularly important to the growth of the economy. Pathways in health services and health technology are also becoming increasingly popular due to the increase of jobs in those sectors. In addition, Pathways could be reviewed to reflect social needs, such as focusing on skills such as civic engagement, community involvement, or social supports that are not reflected in learning programmes. Ideally, future iterations of New Zealand's Vocational Pathways could be targeted to reflect national priorities, either economic or social.

This continued assessment would not be without its challenges, as it may require regular shifts in focus for the Vocational Pathways. However, the trade-off of maintaining the status quo should be balanced against the benefits of Pathways that are flexible enough to respond to the changing needs of students and employers.

3 ADDRESSING KEY CHALLENGES

In addition to the risks identified in Chapter 2, there are other key challenges that have the potential to impact the success of the Vocational Pathways. The variety of skills-related programmes currently being pursued by government agencies and the lack of a clear vision encompassing them all can lead to conflicting messages and confusion on the part of stakeholders who have to implement the Pathways. Similarly, the lack of clarity around what is expected of schools, the benefits for students, and the intent of the Pathways has the potential to undermine the success of the Pathways. Finally, resource constraints and funding inconsistencies could impede the partnerships necessary for success.

Fragmentation of Skills Development Programmes

Because skills issues cut across a variety of policy areas, it is not uncommon for multiple agencies to be involved in addressing skills development. In New Zealand, the Ministry of Education, the Ministry of Business, Innovation and Employment (MBIE), the Ministry of Social Development (MSD), the Tertiary Education Commission (TEC), Careers New Zealand, and NZQA each own policies related to skills development. More often than not, each of these entities, and the individual departments within each entity, is operating under assumptions that reflect an individual, not a collective, idea of how best to address the issues surrounding skills development. For example, the Ministry of Education approaches skills development from a student focus, seeking opportunities to increase options and improve outcomes for students through skill development. MBIE, however, approaches skills from a business needs perspective, looking for opportunities to address specific skills gaps identified by industry.

Varied approaches don't have to contradict one another, but without common guiding principles for addressing skills questions, they can often result in confusion for stakeholders and the duplication of effort. Stakeholders reported frustration at getting "mixed messages" and at having to adapt their programmes to accommodate the different approaches from different entities. They also expressed concern that the lack of consistency resulted in inefficiencies and competing priorities. Within government, skills development is recognised as a cross-cutting issue, with many entities seeing the benefit in developing an approach that includes a variety of stakeholders. Table 1 provides a sampling of the cross-functional and cross-sectoral groups that have been formed to consider some aspect of youth skills development.

Table 1: A Sample of Groups Currently Addressing Youth Skills Issues

Group	Members	Focus	Facilitator
Pathways Advisory Group	School leaders, industry training providers, tertiary leaders, community leaders, business leaders, ITF, Ministry staff	To develop Vocational Pathways	Ministry of Education
Youth Guarantee Networks	School leaders, tertiary providers, community leaders, business leaders, Ministry staff	To develop regional partnerships that will support the develop of options for students and the capacity of schools and providers to deliver them	Ministry of Education
Vocational Education and Training Working Group	ITOs and ITP leaders	To ensure that the VET sector works in the best interests of learners, employers and industries	ITF
Careers Capable Working Groups	Business leaders, career educators, community leaders, school leaders	To develop comprehensive regional skills development strategies	Careers New Zealand
Cross Sector Forum – Student Transitions Working Group	Ministry staff, academics, education leaders, business leaders, community leaders	To identify strategies for easing student transition points from early childhood through university	Forum Members
Educational Attainment Working Group	Academics, business leaders, training providers	To develop a plan for better serving priority learners at the foundational tertiary level	AKO Aotearoa National Centre for Tertiary Teaching Excellence

These groups, which are not an exhaustive list of those currently convened to address youth skills development, indicate there is both a broad understanding of the need to take a cross-government and cross-sectoral approach to addressing skills development issues, but also a desire for stakeholders from a variety of areas to work together to address skills development opportunities for young New Zealanders. While New Zealand does have cross-government approaches to skills development, including the Skilled and Safe Workplaces initiative, there is not an overarching skills strategy that ensures that skills development programmes are consistent and complementary across policy areas.

Staff in several departments expressed concerns that coordination of skills work across entities was often "ad hoc' and undermined by different perceived end goals. In the 2012 Skills Strategy, the OECD notes that "the key challenge...is putting such [skills] strategies into practice and adopting a holistic approach that includes all relevant actors."[80] New Zealand did release a New Zealand Skills Strategy in 2008, but there is no evidence it has been updated.[81] The Government should consider refreshing the New Zealand Skills Strategy, to create guiding principles that reflect and support new skills-focused programmes initiated since 2008, including the Vocational Pathways and the government's Better Public Service Targets; and also set out clear goals for skills development and enhancement for all New Zealanders with a clear vision for how all of these pieces will fit together to meet these goals.

Lack of Clarity Surrounding the Vocational Pathways

The second key challenge is not unrelated to the first, in that they both stem from the fact that skills development programmes require the active participation of stakeholders from a variety of sectors and policy areas. As discussed in Chapter 2, the Pathways development process incorporated stakeholder interests ensuring the design reflected their various needs. Now that implementation has begun, stakeholder groups beyond the leadership represented on the PAG are becoming familiar with the Pathways. As would be expected in any early-stage implementation, there are some disconnects that exist between what stakeholders think Pathways will be versus what the Pathways are actually intended to be. These disconnects are concentrated in two main stakeholder groups, the schools and training providers that will need to implement the Pathways and the families and communities who will use the Pathways.

Schools, providers, and entities working with providers expressed apprehension at rolling out the Pathways, with many thinking they would be required to implement all Pathways or that they would need to completely reframe their courses to implement the Pathways. The Ministry's messaging has made it clear that schools are neither expected nor required to change anything to implement the Pathways. However, this message runs counter to the messaging delivered to the Youth Guarantee Networks which indicates that schools should be prepared to make systemic changes to the way they approach education in order to implement the Vocational Pathways. The Ministry needs to develop a comprehensive vision that provides clear expectations and goals for the Vocational Pathways. A lack of clarity around the overall goals and expectations could undermine the success of the Pathways by fostering a fragmented

[80] OECD (2012b), pg. 107
[81] New Zealand Government (2008)

and inconsistent approach to implementation at the school level and a lack of understanding about the type of changes schools need to make to ensure success. This information asymmetry, coupled with a lack of clear incentives could impede achieving the full impact of the Pathways.

Some stakeholders also expressed concern that because the Vocational Pathways make it easier for non-school providers to deliver NCEA Level 2 qualifications, the level of competition between providers will increase. Youth Guarantee Networks can be used to allay these concerns in two ways. Firstly, Youth Guarantee Networks should enable schools and providers in an area to build relationships with one another, relationships centred on cooperating with one another to serve all students rather than competing to meet individual goals. Secondly, by working with community partners to develop an approach that meets the needs of all students, some of whom are well served in a traditional school environment and some of whom are better served by a polytechnic or a PTE. Creating a level playing field for all providers through funding and accountability changes can also alleviate some of the fear of competition.

From a family and community perspective there are two main areas where increased clarity could address potential risks. The first is the branding of the Pathways. Because they are labelled as 'vocational' and because in some instances, they are presented as an alternative to the university pathway, there is a danger that the Pathways will become viewed as a 'second-tier' track for students of lower academic abilities. The Ministry is using a variety of strategies to address the branding issue such as incorporating the message that all pathways, including university pathways, are vocational into presentations and focusing on how all students can use the Pathways to enhance their secondary school experience. The continued development of Vocational Pathways for NCEA Level 3 qualifications, the most advanced secondary school qualification, will also help to reinforce the idea that Vocational Pathways are not just for students who will leave secondary school after achieving NCEA Level 2. In the United States, schools have had some success at improving the brand of vocational training by concentrating efforts on high-skilled vocational training, including engineering, technology, and health sciences.

To ensure the success of the Pathways, the Ministry must also create an environment where students and families have enough information to successfully navigate them. While the Vocational Pathways include information that highlights possible career options, successful implementation needs to be complemented by comprehensive career education programmes. On the whole, schools need assistance in developing the supports necessary for students to effectively use the Pathways. In their 2012 analysis of Careers Information, Advice, Guidance, and Education (CIAGE) in secondary schools, the Education Review Office (ERO) found that only 4 of the 44 schools reviewed "had high quality approaches to CIAGE, characterised by their innovative school-wide focus on helping students identify, plan and strive for their aspirations for the future," with most schools providing CIAGE only as an add-on, rather than a fully integrated component.[82] In a follow-up review in 2013, the ERO found that only 10 of the 74 schools reviewed offered a programme that was responsive to student needs with regard to Pathway development.[83]

Some of these issues stem from the manner in which CIAGE is resourced and

[82] Education Review Office (2012), pg. 11
[83] Education Review Office (2013), pg. 10

regulated at schools. Under the current funding scheme, careers advisor positions are funded through the staffing quota, with no requirement that the careers advisor have careers experience. Many schools have teachers who serve part-time as careers advisors. The Ministry is currently completing a CIAGE review that would address these issues by developing strategies to improve school capacity to deliver careers education and track post-school student outcomes to determine the impact of CIAGE. The review also considers changing CIAGE funding to give schools more flexibility in providing those services. The CIAGE review is being conducted under the auspices of Youth Guarantee and as such, its strategies and outcomes can easily be aligned to the Vocational Pathways.

Careers New Zealand has also taken on a leading role in enhancing careers education for students, becoming a "one-stop shop" for careers advice. Their recently launched Compare Study Options online tool allows students to compare employment outcomes for different study options.[84] Careers New Zealand is currently working to incorporate MBIE's Occupational Outlook reports, which are aligned to the five Vocational Pathways sectors. In addition to creating user-friendly tools to help students consider career options, Careers New Zealand is also developing strategies to assist schools in improving their CIAGE capacities. In 2012, they released the Career Education Benchmarks, a set of tools for schools to use to improve the integration of CIAGE programmes into all aspects of the school curriculum.[85] The Ministry of Education is working closely with Careers New Zealand to ensure that future Ministry CIAGE policies do not conflict with the Career Education Benchmarks.

Resourcing Inconsistency Undermines the Vocational Pathways

Partnerships between schools and tertiary providers are essential to the Vocational Pathways. In fact, Youth Guarantee Networks focus almost exclusively on building partnerships between providers. However, several stakeholders mentioned that inconsistencies in funding and accountability between schools and other training providers create an environment that discourages cooperation. Currently, schools receive operational funding and staffing allowances based on the number of students on their attendance role and they are held accountable to the terms of their charters, which can vary by school. School accountability is conducted mainly through ERO reviews. Tertiary and training providers are funded based on the number of students who complete their programmes and are held accountable by the TEC to defined performance metrics.

Consequently, tertiary providers resent schools because even though the two entities are both providing the same programme, they are not held accountable to the same standards or subject to the same funding pressures. Schools on the other hand, are often reluctant to enter into partnerships with tertiary providers, because they fear losing funding if a student attends courses at a tertiary provider. Allocating some of their funding to a tertiary provider presents challenges for schools because operational and staffing costs are often not diminished if a small number of students attend tertiary courses several days a week. These funding challenges also impact Trades Academies, whose models are dependent upon the movement of students between the

[84] The Compare Study Options tool can be found at http://www.careers.govt.nz/tools/compare-study-options/, accessed 19 July 2013

[85] The Career Education Benchmarks can be found at http://www.careers.govt.nz/educators-practitioners/planning/career-education-benchmarks/, accessed 19 July 2013

two types of providers during the week, requiring them to negotiate those funding tensions with schools. Some Trades Academies reported that schools were often reluctant to allow students to participate in their programmes, despite expressed desire from students to do so, because schools don't want to share funding.

The Ministry is currently exploring options to refine school funding models. Any future model should consider the implications that Youth Guarantee and the Vocational Pathways have on school funding and the systems that would need to be in place to effectively support those strategies. Funding models should also consider what resources, funding or otherwise, can be provided to Network members to ensure the level of participation necessary to ensure implementation success.

CONCLUSION

The Vocational Pathways have the potential to enhance the secondary experience for all New Zealand students. They do not seek to redesign the system entirely, but rather create a framework that makes the sometimes confusing NCEA qualification process easier for both students and employers to understand.

The Vocational Pathways also represent a true partnership approach to policy development. They were created in response to an identified need both on the part of educators and the business community. The educators and experts who developed the NCEA noted the need for multiple pathways to support the diverse needs of students and employers saw a disconnect between the skills students were developing in secondary school and the skills they would need to succeed in a workplace. Therefore, they are infused both with a desire to enhance learning for all students and with an authentic understanding of how existing standards relate to future employment. The Pathways also represent a partnership between various government agencies who are working together to ensure that each piece of related information or advice they produce is presented to students in a consistent way. Finally, their implementation, as part of the Youth Guarantee initiative, is centred around building community partnerships to support success for all students. The Vocational Pathways are not without their challenges, but the mix of measured patience and necessary urgency with which they have been implemented means that they are moving forward with enough time to address these challenges while still maintaining momentum.

While the Ministry of Education has rightly focused its efforts on creating highly skilled students who can succeed in any career, efforts now need to be made to ensure that students are able to effectively utilise those skills when they complete their education. Enabling students to develop competencies employers value is one side of ensuring that young people can achieve future success, but providing opportunities for students to use those skills in the workplace is also important. The Ministry should take the successful partnership approach used to develop the Vocational Pathways and work with MBIE and other stakeholders to refine those Pathways in a way that ensures they will support the economic success of students by effectively reflecting the demand from employers for highly skilled individuals.

RECOMMENDATIONS

The Ministry should consider the following recommendations to further develop the Vocational Pathways and Youth Guarantee:

- **Develop clear goals and expectations for the Vocational Pathways**
  - Identify the Ministry's desired outcomes for the Pathways and ensure those are aligned with the current implementation approach
  - Work with schools to ensure there is clarity around expectations and that there is adequate support and time for all schools to meet those expectations
- **Revise resourcing and accountability structures to incentivise goals**
  - Create consistency of funding and accountability across provider types to remove barriers to cooperation
  - Consider other resources, including in-kind support or a mentor program that pairs early adopters with schools just starting out,[86] that can be provided to schools to support implementation
  - Explore innovative funding models including providing matching funds to schools who secure investments from business partners[87]
  - Consider providing start up funding to schools who propose innovative ways to implement the Pathways
  - Develop measures to assess the impact of the Pathways including qualitative measures like student and employer satisfaction ratings
- **Encourage schools to personalise learning by removing roadblocks**
  - Analyse the barriers to personalisation at the senior secondary level, including the manner in which students enrol in schools, the manner in which schools are funded, and restrictions on staffing and work with schools to develop strategies for removing those barriers
  - Explore other opportunities that further enable students to take control of their learning, by choosing the delivery model and timing that best meets their diverse needs
- **Explore the use of technology to enhance students' Vocational Pathways experience**
  - Allow students to earn credits and showcase their skills in non-traditional ways, including online courses or the use of technology to compile portfolios of work[88]
  - Ensure Vocational Pathways are integrated into other related initiatives

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[86] When implementing their high school redesign initiative, New Hampshire used a mentor program to allow schools just starting to go through the process to learn from schools that had been there before.

[87] The most recent proposal for the reauthorisation of the Perkins Act, federal legislation governing career and technical education in the United States, requires that schools demonstrate matching funds from business partners in order to secure federal grants.

[88] Two related trends in the United States are 'badge' programs (http://openbadges.org; http://chicagosummeroflearning.org/earn) that allow users to earn recognized credits that travel with them in an online profile, similar to the Vocational Pathways profile building tool; and online tool that allows users to create an eportfolio of their work (https://pathbrite.com/), including videos, presentations, and other work samples. Both programs focus on life-long learning, allowing students to retain their profiles after they have left school and add to them throughout their careers.

including modern learning environments and efforts to incorporate innovation and entrepreneurship into the curriculum

- **Improve transitions by incorporating Pathways thinking into earlier grades**[89]
  - Get students thinking about future aspirations before age 12-14, the age at which students are most likely to disengage
  - Work with primary schools to build "cultures of aspiration" that encourage younger students to think about what they might like to do in the future and what they might need to do to reach those goals

[89]American schools and programs (http://www.citizenschools.org/; http://www.matchbooklearning.com/) have shown improved student outcomes, both in school and later in life by creating cultures of aspiration and success, focused on future career goals, beginning in primary and middle grades

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APPENDIX I: NATIONAL CERTIFICATES OF EDUCATIONAL ACHIEVEMENT[90]

The National Certificates of Educational Achievement (NCEA) are the main secondary school qualifications that secondary students can earn in New Zealand. Senior secondary typically spend their final three years of high school earning one or more NCEA qualifications.

The NCEA were introduced between 2002 and 2004 to replace the previous secondary school qualifications system.[91] They account for three of the many qualifications recognized under the New Zealand Qualifications Framework (NZQF) which is a comprehensive list of all qualifications in New Zealand, from those earned in secondary school through advanced tertiary degrees that have been approved by the New Zealand Qualifications Authority (NZQA).

Students achieve NCEA qualifications by earning credits for each standard achieved in a course of study.

- Standards identify the skills and knowledge students are expected to develop during a course, much the same as the Common Core Standards and standards developed by individual states in the United States
- There are two types of standards assessed under NCEA, achievement standards which are tied to the New Zealand curriculum and unit standards which are competency-based
- Each standard is assessed either internally, through classroom tests or assignments, or externally, using an end of the year exam or portfolio of work
- Achievement standards are graded along the following scale Not Achieved (N) if requirements are not met, Achieved (A) for satisfactory performance, Merit (M) for good performance, and Excellence (E) for excellent performance
- Unit Standards are typically graded as Achieved (A) or Not Achieved (N)
- Students who pass an assessment earn the number of credits associated with that standard
- When student accumulate the necessary number and type of credits, they earn the appropriate NCEA qualification
- If a student earns 50 credits at the Excellence or Merit level, his or her NCEA will be endorsed with Excellence or Merit respectively
- Students do not have to earn NCEA certificates in sequence and can earn them simultaneously
- For each Level students must earn 80 credits and meet the following criteria
    - Level 1: 80 credits at any level, including 8 literacy credits and 8 numeracy credits
    - Level 2: 80 credits with a minimum of 60 credits at Level 2 or above
    - Level 3: 80 credits with a minimum of 60 credits at Level 3 or above and 20 credits at Level 2 or above

[90] New Zealand Government (2012), pg 1-10.

[91] http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/understanding-ncea/history-of-ncea/, accessed 22 July 2013

APPENDIX II: VOCATIONAL PATHWAYS INDUSTRIES

Vocational Pathway	Industries Include
Manufacturing and Technology	• Manufacturing in a variety of industries including food and beverage, clothing and home goods, machinery and equipment, pharmaceuticals and medical devices, chemicals and plastics, specialised crafts, wood and paper • Engineering and electronics • Information and communications • Green technology • Computer aided design • Defence and robotics • Software development • Nanotechnology
Construction and Infrastructure	• Building • Contracting • Joinery • Painting and decorating • Glazing • Home design • Excavation • Surveying • Utility development and maintenance • Transportation • Port management • Plumbing • Road and bridge repair
Primary Industries	• Agriculture • Horticulture • Forestry • Fishing and seafood processing • Meat processing • Wood processing • Furniture making
Social and Community Services	• Education • Psychology, social work, and therapy • Health care • Funeral director • Law and justice • Defence • Public services – fire, police, emergency management, health and safety
Service Industries	• Hospitality • Travel and tourism • Hair and beauty • Retail • Journalism and writing • Customer service • Personal training and fitness

APPENDIX III: YOUTH GUARANTEE[92]

Youth Guarantee is multi-pronged programme aimed at achieving the Better Public Services goal that 85 per cent of 18 year olds will achieve NCEA Level 2 or its equivalent by 2017. To support this achievement, the initiative focused on providing learners with more choices to earn NCEA Level 2 and with support to transition into further study.

There are two primary, but related components of the Youth Guarantee:

1. **Vocational Pathways** – As discussed extensively throughout this report, Vocational Pathways provide a framework for students to explore career opportunities in five industry sectors; to see linkages between education and employment; and to plan a course of study that enables them to achieve future career goals.
2. **Secondary-Tertiary Programmes –** Secondary-tertiary programmes (STPs) are school and tertiary partnerships that provide opportunities for secondary school students to learn in a tertiary setting and ease transitions from secondary school to tertiary studies. STPs are typically one of the following models: 1) Trades Academies, partnerships between schools, tertiary providers, and community groups where students combine their academic studies at school with trades-focused studies at a tertiary or industry training provider as part of a comprehensive NCEA Level 2 programme; 2) Service Academies, partnerships between schools and the Defence Force where students combine their academic studies at school with military training delivered by the Defence Force; 3) Fees Free Programmes, where students who have not yet completed their NCEA Level 2 qualification at school receive funding for one year of study at a tertiary education provider where they complete foundational vocational qualifications.

In 2013, the Ministry established Youth Guarantee Networks to implement these programmes at the regional level. As discussed in this report, the Youth Guarantee Networks are regional partnerships between schools, tertiary institutions, training providers, and community leaders to develop new learning opportunities for students in their communities. Initially, the Youth Guarantee Networks are focusing their efforts on implementing the Vocational Pathways. There are currently 21 Youth Guarantee Networks in existence with the intention of adding more over the next few years.

Each member of a Youth Guarantee Network signs a non-binding Memorandum of Understanding (MOU) that recognizes that all parties are autonomous organisations that agree to work together to raise NCEA Level 2 rates for students in their communities, by creating new pathways for students, including the Vocational Pathways.

An MOU template is included in Appendix IV.

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[92]http://www.minedu.govt.nz/theMinistry/EducationInitiatives/YouthGuarantee/AboutYouthGuarantee.aspx, accessed 21 July 2013

APPENDIX IV: YOUTH GUARANTEE NETWORK MEMORANDUM OF UNDERSTANDING TEMPLATE

Youth Guarantee Networks

Memorandum of Understanding (MOU) to Establish and Implement the *[State Name of the Network]* to support senior students to Achieve and Transition to further education or work

1. This MOU is between (names of organisations involved):

    - Xxx
    - Xxx
    - Xxx
    - Xxx
    - Xxx
    - Xxx

The (STATE NAME) Approach

2. The MOU reflects our decision to establish and implement a collaborative network/partnership. Our network/partnership will work together to raise NCEA L2 achievement rates for our shared learners and develop more effective transitions of our learners to further education or work. Our primary focus is on those learners who are at risk of not achieving NCEA L2 and those who are not making effective transitions.

3. Our network/partnership is based on our shared common interests which we have described in the annex to this document.

4. We will share learner achievement data, information and teaching and assessment practices the network/partnership so that we can learn from each other and each other's organisations.

5. We recognise that in order to be effective, we will need to make significant system and operational changes. This includes combining our resources, leadership and expertise, sharing resources to achieve economies of scale and developing and supporting different approaches, for example, timetabling. We will introduce new learning programmes based around the Vocational Pathways.

6. The network/partnership is committed to serving the needs of our communities – including learners, their parents, whānau and family and employers. We are committed to developing and improving our partnership with our communities and to understand and respond to our communities' needs and aspirations.

Shared Commitment to Goals

7. This MOU reflects our shared commitment to key goals. These include the following.

    - Raising achievement rates for 16-17 year olds in our community of interest. We commit to setting a specific achievement target to measure our progress.
    - Achieving equitable results for priority group learners including Māori, Pasifika and learners with special education needs.
    - Improving attendance, retention and engagement of our learners

- Increasing the proportion of our learners that successfully transition to further education or work. We commit to setting a specific achievement target to measure our progress.
- [Other agreed goals]

8. In order to achieve these results, we are committed to providing new learning arrangements and opportunities for our young people. These include:

    - new learning programmes based around the vocational pathways
    - relevant learning and assessment contexts that cater to the needs of our learners
    - new pathways and arrangements that support each of our learners to make effective transitions to further education and training (including apprenticeships) and work.

Operational Systems and Procedures

9. This MOU expresses our commitment to establish effective operational procedures and decision making processes. We agree to resolve issues as they arise constructively and collaboratively; so that our network is sustainable and effective over time.

10. Outlined below are the initial operational procedures and decision making processes that we have agreed on to give effect to this commitment.

_____
_____
_____

11. We are committed to assessing at least every six months the progress we are making to achieving our key goals, and to and an annual review of the of this MOU. We are committed to reaching agreement on changes that may be needed to the MOU from time to time better to implement its intent.

XXX Organisation	XXX Organisation
Chairperson, Board of Trustees/ Chair, Council	Chairperson, Board of Trustees/ Chair, Council
Principal/Chief Executive	Principal/Chief Executive
Date:	Date:

Annex

Description of our Common Interests

The parties to this Memorandum of Understanding are schools and tertiary providers based in XXX. Our community etc etc

APPENDIX V: INDUSTRY TRAINING ORGANIZATIONS[93]

ITO	Industries Served
Building and Construction ITO	carpentry, cement and concrete; floor and wall tiling; frame and truss manufacturing; interior systems; proprietary plaster and cladding systems; solid plastering; brick and block laying; historical masonry trades; construction management; architectural technology; quantity surveying
Careerforce (Community Support Services ITO)	health; aged care; disability; mental health and addiction; social services; contract cleaning; urban pest management
Communications and Media ITO	printing and journalism
Competenz	food and beverage processing; refrigeration, heating, air conditioning; locksmithing; fire alarms and protection systems; retail meat; forest management and establishment; siviculture; harvesting; solid wood processing; pulp and paper; wood panels; biosecurity; furniture manufacturing; finishing; upholstery; cabinet making; retail
Electricity Supply ITO	design, construction, operation and maintenance of the production, transmission and distribution of electrical energy
EMQUAL – Emergency Management Qualifications	fire – urban, vegetation, industrial and airport; search and rescue – land, maritime, and urban; New Zealand Coordinated Incident Management System; workplace emergency requirements; civil defence
Floor NZ and Decorate NZ	sanding and finishing; carpet laying; vinyl and wood installation; retail/wholesale sales and support; painting and decorating
Funeral Services Training Trust[94]	embalming; funeral directing and services
HITO	hairdressing; barbering; beauty services; salon management
InfraTrain	civil engineering; civil construction and maintenance; roading and pavement surfacing; roadmarking; utilities and subdivisions; demolition; rural contracting and agrichemical application; surveying; procurement, contract, and asset management
Joinery ITO	joinery; architectural aluminium joinery; kitchen and bathroom design and manufacturing; glass and glazing
MITO	motor industry; industrial textile fabrication; commercial road transport; passenger services; warehousing and logistics; stevedoring and ports; quarrying, mining, drilling, explosives, and tunnelling; gas and petrochemicals; abrasive blasting; protective coatings; resource recovery; waste management; steam and hazardous gases
NZ Marine Industry Training	boat building; marine sales and services; marina operations and services; composites manufacturing
NZITO	dairy manufacturing; research livestock improvement; meat processing; fellmongery; seafood
PAMPITO	plastics production; glass container manufacturing; paint, ink & resin manufacturing; pharmaceutical and allied products manufacturing; apparel and textiles manufacturing; laundry and dry cleaning
Pharmacy ITO	community and hospital pharmacy
Primary ITO	farming; wool handling, classing, and shearing; stock and station; fencing; water supply and wastewater; agribusiness; poultry; equine; plant and forest nursery; fruit and vegetables; production; floristry; landscaping; arborculture
Service IQ	accommodation; aviation; cafes, bars and restaurants; food services; museums; quick service restaurants; retail; tourism; travel; wholesale

[93] ITOs as of 1 May 2013. http://www.itf.org.nz/industry-training/industry-training-organisations-itos/industry-training-organisations-and-related-industries/, accessed 21 July 2013

[94] Serves to develop qualifications and set standards, but does not receive government funding

Skills Active	sport; fitness; community recreation; outdoor recreation; snowsport
The Skills Organisation	ambulance; contact centre; electrotechnology; financial services; offender management; security; telecommunications; real estate services; public sector and local government; plumbing; gasfitting; drainlaying, and roofing; power crane operation; rigging and slinging loads; scaffolding; rigging and industrial rope access