

The Economic Contribution of the Wānanga Sector

2014

Commissioned by:



TE TAUIHU O NGĀ WĀNANGA

He Whakamarama

He kupu whakarite te ringahora mõ tētehi e kaha nei ki te manaaki tāngata ahakoa ko wai. Pēnei anō ngā Wānanga e toru e hora nei i ōna tini hua mātauranga nei hei oranga mō āna tauira katoa.

Ringahora is a metaphor attributed to one who makes an effort to assure for the needs of anybody, no matter who. Such are the three Wānanga who provide an abundance of educational opportunities as sustenance for all of their tauira.

This report arises from research undertaken by BERL, Business and Economic Research Limited - www.berl.co.nz.

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Foreword

Wānanga Ringahora:

Honouring the continued combined strength and effort of ngā wānanga to provide our people with all that they need to be who they are.

Pupurihia te Mātauranga, mā te ringa raupā, ka mau, ma te Wānanga Ringahora hai toha.

Wānanga Sector

(Recognised under Section 162 of the Education Act 1989)

The three Wānanga – Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi – are recognised as tertiary institutions under Section 162 of the Education Act 1989.

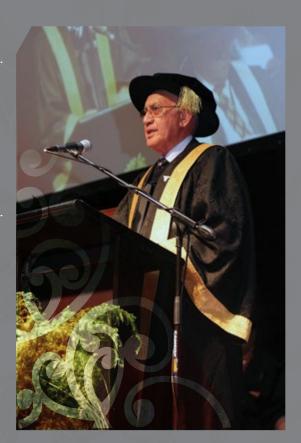
S162 (4)(b)(iv) of the Education Act 1989 characterises a Wānanga "by teaching and research that maintains, advances, and disseminates knowledge, develops intellectual independence, and assists the application of knowledge regarding āhuatanga Māori (Māori tradition) according to tikanga Māori (Māori custom)".

All three are established under the Education Act 1989 and have now been in operation for three decades. Each Wānanga has emerged out of tribal environments and are now providing a broad range of services.

Wānanga educational programmes are accredited through the New Zealand Qualifications Authority (NZQA). This publication aims to provide information about the Wānanga sector and its contribution to the New Zealand economy.

S. M. mead

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Executive Summary

Te Tauihu o ngā Wānanga represents the Wānanga sector. The kaupapa of this Wānanga sector is to ensure collaboration and coordination between Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, and to maintain a strong focus on the achievement of Māori students. BERL was engaged by Te Tauihu o ngā Wānanga to measure the contribution the Wānanga sector makes to the New Zealand economy, including economic and social wellbeing.

Short-term impacts

The Wānanga sector is a significant employer in the communities where their main campuses are located. The number of students studying on campus also impacts on the community, through their purchase of goods and services and use of local facilities. Many campuses are located in small towns rather than major cities, and this increases the impact the Wānanga sector has on the economy of a community.

The total impact of the financial operations and activities of the Wānanga sector on the New Zealand economy in 2012 was \$482 million in expenditure on goods and services, \$321 million in Gross Domestic Product (GDP), and the employment of 2,890 Full-Time Equivalents (FTEs) noted in Table 2.3.

These impacts are the short-term economic gains to the national economy from spending by the Wānanga sector. To more broadly understand the impact that the Wānanga sector has on the economy, it is also important to understand who undertakes learning within these organisations, and the impact that the Wānanga sector has on the skills development and productivity of these communities.

Student profile

In 2012, 40,989 students were enrolled and studying with Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. The largest Wānanga was Te Wānanga o Aotearoa with 32,370 students or 79 percent of the student body. In 2012, 1,563 Full-Time Equivalent (FTEs) staff were directly employed by Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, with the greatest number of staff employed at Te Wānanga o Aotearoa (1,160).

Generally, Wānanga students tend to enrol part-time and are older than the average tertiary student cohort. In 2012, 52 percent of students were aged over 40, and 56 percent were enrolled part-time.¹ Approximately 35 percent of these students had no secondary school qualification prior to beginning their study, while 25 percent had NCEA level 1 or 2, and 7 percent had an NCEA Level 3 qualification. In addition, 51 percent were employed or self-employed prior to undertaking their study at a Wānanga, and 20 percent of students were beneficiaries or not in employment.

The provision of a Wānanga learning environment in the tertiary education sector therefore provides a segment of the market with an education opportunity to which they would not otherwise have access. The satisfaction of this market need can be observed through Education Performance Indicators (EPIs) such as course and qualification completion rates, and students progressing to higher levels of study.

Performance measures

EPIs have been established to evaluate the return on government investment in tertiary education. There are four main EPIs – successful course completion, qualification completion, student retention, and student progression from Level 1 to Level 4 qualifications.

The four EPIs, however, do not measure the contribution that individual Wānanga make as providers of Māori programmes within the education sector, nor do the EPIs acknowledge the contribution of the Wānanga sector in promoting and growing Māori language, knowledge and culture.

People choose to study in a Wānanga learning environment to enhance their skills and productivity, to improve their current and future job and career prospects, and to increase their earning potential. Each of these factors impacts on the individual, their whānau and the community they live in. They also lead to economic growth, which in turn contributes to higher living standards.

Wānanga learning environment – the point of difference

Economic benefits are not the only driver behind investment in skills, education and training. People choose to study in a Wānanga learning environment because this sector is focused on inter-generational, marae-centred learning: te reo Māori and mātauranga Māori are central tenets of the activities of Wānanga. This learning environment is a point of difference between Wānanga and other tertiary education providers, yet this difference is not acknowledged through the current EPI measures. These measures may therefore be too narrow for this sector, its environment and operations.

The Wānanga sector is focused on the development of human and cultural capital as part of its investment in education and well-being. Mātauranga Māori – its maintenance, development and dissemination – is central to the activities of each Wānanga, and each operates according to the tikanga of its founding iwi. This is a significant point of divergence for the three Wānanga in that while all are acknowledged as Wānanga, each is also distinctly unique and different from the other. While there are similarities – in terms of what binds them together through the Act – each iwi has different priorities. These are reflected in the structure and programmes offered by each institution.

The long-term economic gains of the establishment of each Wānanga, and their provision of a Wānanga learning environment, are therefore more broadly encapsulated in Wānanga being the education arm of future iwi, hapū and whānau development, and their impact on higher living standards.

The New Zealand Treasury is developing a framework to act as the "heart of its policy advice" ² consistent with its goal to increase living standards in New Zealand. The Living Standards framework could provide an additional means of measuring government investment in the Wānanga sector, as this framework indicates that the various elements of social capital, such as language and culture, have a value that can conceptually be quantified. This framework also indicates that investment by the Wānanga sector in the revival of Māori language and culture increases social infrastructure and, thereby has an impact on living standards.

Looking ahead

The Wananga sector will need to evolve and grow to meet the changing needs of potential students. These students may have higher prior qualifications and different learning needs based on changing job opportunities and career paths.

This assumption is based on changes in the labour market, technology improvements, and the successful outcome of public policy such as the Better Public Services education sector goals that support the current government's Business Growth Agenda.

Currently, the Wananga sector is well placed to support public

policy goals focused on improving the education outcomes of young Māori school leavers. In addition, strategic plans and medium and long-term visions within the Wānanga sector focus on supporting growth in the Māori asset base and subsequently the Māori economy, and on an increase in the proportion of the New Zealand population who are Māori. Statistics New Zealand demographic projections indicate that nearly 60 percent of the increase in the total New Zealand population toward 2021 is expected to occur in Tāmaki Makaurau. However, nearly 70 percent of the increase in the total number of Māori will occur outside of this area. This means Māori are well set to bolster, drive, and indeed lead the economic development of many regions over the coming decade.

This demographic opportunity places the Wānanga sector in a central position in regard to developing the labour capacity, capability and skills that will potentially underpin the economic development of these regions.

These arguably conservative demographic projections from Statistics New Zealand send a message of challenge and opportunity for the Wānanga sector.

• The challenge is in the form of increased competition from other tertiary institutions in regions where Wānanga are located. Given that these are smaller or rural regions, the demand for tertiary education provision in these regions will be difficult as the overall market size stalls in line with these population projections. Consequently, other tertiary providers may look to modify their existing services in order to appeal to those currently served by the Wānanga sector.

• The opportunity is in the form of an increased market for specialist Wānanga provision in the regions, as well as further opportunities to collaborate with other tertiary providers who recognise the specialist expertise of Wānanga.

Beyond these market considerations, the broader picture is one of opportunity for the Wānanga sector to be pivotal in shaping the development of regions around New Zealand. The objectives of Wānanga differ from other tertiary institutions. Wānanga adherence to tikanga, te reo and āhuatanga Māori means that they have an interest in the development of Māori communities, iwi and hapū. This encompasses a broader educational goal for whole communities rather than for individuals. In addition, the demographics clearly indicate that many regions will be reliant on Māori for population and economic growth.

² See http://www.treasury.govt.nz/publications/media-speeches/speeches/livingstandards/sp-livingstandards-advice.pdf and http://www.treasury.govt.nz/abouttreasury/higherlivingstandards and related papers.

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1 Introduction

Te Tauihu o ngā Wānanga represents the Wānanga sector. The kaupapa of this organisation is to ensure collaboration and coordination between Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, and to maintain a strong focus on the achievement of Māori students. BERL was engaged by Te Tauihu o ngā Wānanga to measure the contribution the Wānanga sector makes to the New Zealand economy, including economic and social well-being. To meet this research aim, this project was undertaken in two stages.

• The first stage focused on undertaking an economic impact assessment of the operations of Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. This assessment considered the impact the operation of these tertiary education providers had on the New Zealand economy, and drew on economic theory and methodology to consider output, value-added (Gross Domestic Product), and employment.

• The second stage focused on the staff and students of Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. This assessment considered the broader impact this sector has on economic and social wellbeing, and the contribution these institutions make to the communities they operate in. It considered who undertakes learning at Wānanga, and the impact the Wānanga sector has on the skills development and productivity of these cohorts. It also compared these students with the broader tertiary student body.

BERL worked with Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi staff members to collect, collate, analyse and assess data and information on each of the respective Wānanga.

Data and information was also gathered on the Wānanga sector and the tertiary education sector from official data sources such as the Ministry of Education, Statistics New Zealand, Immigration New Zealand, the Tertiary Education Commission, and the Ministry of Business, Innovation and Employment.

This report begins with a discussion on our research findings regarding the economic contribution of the Wānanga sector. This discussion considers the immediate impacts of funding tertiary education in the Wānanga sector, and the wider impacts of the gains to the New Zealand economy of educating and training people. This section of our report also discusses the economic rationale for investing in skills and how the current government measures the return on this investment. The Wānanga sector is focused on the development of human and cultural capital as part of their investment in education and well-being, and this is discussed in this section of our report.

Section 3 provides an overview of the establishment of Wānanga, and the founding principles and guiding kaupapa of Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. This section of our report illustrates the distinct nature of Wānanga, and how Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi are advancing their core purpose through the provision of various courses and programmes of study that are unique and specific to each institution.

Student data and information is provided in Sections 4 and 5. This overview illustrates the similarities and differences between students at Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, and other parts of the tertiary education sector.

Having established a picture of the current student body, the next section of our report looks to the future. Section 6 focuses on the future potential contribution the Wānanga sector could make to the New Zealand economy based on public policy interventions, growth in the Māori economy and demographic changes.

2 The economic contribution of Wananga

This section of our report discusses the immediate impacts on the New Zealand economy of funding the Wānanga sector, and the wider impacts or gains to the New Zealand economy of educating and training people.

Wānanga are modern tertiary education providers that are based on the Whare Wānanga – an ancient Māori institution of advanced learning.³ The Wānanga sector currently includes Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi.

2.1 Immediate impacts of funding Wānanga sector

The Wānanga sector is a significant employer in the communities where their main campuses are located. The number of students studying on campus also impacts on the community, through their purchase of goods and services and use of local facilities. Many campuses are located in small towns rather than major cities, and this increases the impact the Wānanga sector has on the economy of a community.

The total economic impact of the funding of the Wānanga sector is comprised of operational expenditure, which includes staff wages and salaries, administration costs, course costs, building maintenance and capital expenditure, which is expenditure on new buildings or facilities, or upgrades to existing buildings or facilities.

Operational spending at their campuses by the Wānanga sector has an impact on the New Zealand economy. In 2012, the direct impact of the operations expenditure of the three Wānanga on the New Zealand economy was \$173 million of direct spending. The total impact on the New Zealand economy was an estimated \$285 million in GDP, and the employment of 2,518 FTEs. This impact is shown in Table 2.1.

Table 2.1 Total economic impact of operations, Wānanga sector, 2012

	Direct	Indirect	Induced	Total
Output (\$m)	173	87	128	388
GDP (\$m)	136	64	85	285
Employment	1,424	676	418	2,518

Source: BERL, TWOR, TWOA, TWWoA

The total impact on the New Zealand economy of capital expenditure by the Wānanga sector was an estimated \$36 million in GDP, and the employment of 372 FTEs in 2012. This impact is shown in Table 2.2.

Table 2.2 Total economic impact of capital expenditure, Wānanga sector, 2012

	Direct	Indirect	Induced	Total
Output (\$m)	35	43	16	94
GDP (\$m)	11	17	8	36
Employment	139	167	66	372

Source: BERL, TWOR, TWOA, TWWoA

The total impact of the financial operations and activities of the Wānanga sector on the New Zealand economy in 2012 was \$482 million in expenditure on goods and services, \$321 million in Gross Domestic Product (GDP), and the employment of 2,890 Full-Time Equivalents (FTEs). This total impact is shown in Table 2.3.

Table 2.3 Total economic impact, Wānanga sector, 2012

	Direct	Indirect	Induced	Total
Output (\$m)	208	130	144	482
GDP (\$m)	147	81	93	321
Employment	1,563	843	484	2,890

Source: BERL, TWOR, TWOA, TWWoA

These impacts are the immediate economic gains to the national economy from spending by the Wānanga sector. Operational and capital expenditure by the Wānanga sector is determined by tertiary education funding and the effect of this expenditure does not necessarily endure.

To more broadly understand the impact that the Wānanga sector has on the economy, it is important to understand who undertakes learning within these organisations, and the impact that the Wānanga sector has on the skills development and productivity of these cohorts.

These longer-term economic effects, although more difficult to quantify and measure, illustrate the contribution the Wānanga sector makes to the New Zealand economy. The longer-term impact on skills development and productivity illustrates how the Wānanga sector contributes to economic growth by ensuring skills shortages are avoided, the volume of international trade is increased, and innovation is promoted through the dissemination of research and technology.

2.2 Wider impacts and economic gains

The greater contribution of the Wānanga sector to the New Zealand economy is therefore in increasing the capability and capacity of people and their participation as citizens in the labour market and in their community.

In 2012, 40,989 students were enrolled and studying with Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. The largest Wānanga was Te Wānanga o Aotearoa with 32,370 students or 79 percent of the student body. In 2012, 1,563 Full-Time Equivalents (FTEs) were employed at the three Wānanga campuses, with the greatest number of staff employed at Te Wānanga o Aotearoa (1,160 staff).

Approximately 35 percent of these students had no secondary school qualification prior to beginning their study, while 25 percent had NCEA Level 1 or 2, and 7 percent had an NCEA Level 3 qualification.

In addition, 51 percent were employed or self-employed prior to undertaking their study at a Wānanga, and 20 percent of students were beneficiaries or not in employment.

As a group, Wānanga students tend to enrol part-time and be older than the average tertiary student cohort. In 2012, 52 percent of students were aged over 40, and 56 percent were enrolled part-time.⁴

The provision of a Wānanga learning environment in the tertiary education sector therefore provides a segment of the market with the opportunity to undertake training to which they would not otherwise have had access.

Consequently, the Wānanga sector meets a market need, and the satisfaction of this market need can be observed through course and qualification completion rates, graduate outcomes and student satisfaction surveys, and more broadly by language and cultural revival.

2.2.1 Economic rationale for investment in skills

Having the appropriate skills, education and training ensures that, when opportunities arise, people are able to take advantage of them. Moreover, a highly skilled labour force is more resilient to change, and has the ability to successfully transition between jobs and careers as the labour market and employment conditions change.

The key benefits of qualifications to individuals are that they increase their chances of employment, and can potentially enhance their skills, productivity and wages. Education and formal qualifications signal to employers an individual's ability, and can allow individuals to earn more as they use their skills to enhance their productivity.

At a macroeconomic level, the provision of education and training contributes to economic growth by ensuring skills shortages are avoided, increasing the volume of trade, and promoting innovation through the dissemination of research and technology. The Government therefore invests in skills, education and training because it develops human capital, promotes innovation, and facilitates knowledge transfer.

2.2.2 Education performance indicators

To evaluate the efficiency of the return on this investment, an appropriate framework is required. Education Performance Indicators (EPIs) have been established as the current framework and measure, and there are four main EPIs – successful course completion, qualification completion, student retention, and student progression from Level 1 to Level 4 qualifications.

The Tertiary Education Commission argues that:

• Successful course completion is important in terms of gaining skills and knowledge, and because it contributes toward qualification completion.

• Qualification completion is important because students who complete a qualification tend to earn significantly more than those who complete a number of courses but do not complete a qualification. ⁵

The course and qualification completion rates illustrated in Figure 2.1 indicate that the Wānanga sector is providing benefits to the country as an investor in tertiary education. We would add that the educational benefits are also one of educating whole Māori communities.

• In 2011, 80 percent of the students (allocated and measured as EFTS) in the Wānanga sector successfully completed their course, while 67 percent completed their qualification.

⁴ Full-time study is defined as any student who studies for 32 weeks in a calendar year. Study Link defines full-time study as any student who studies 0.8 EFTs in a year. All courses are assigned an EFT value. ⁵ Tertiary Education Commission. Completion of qualifications. (www.tec.govt.nz/Learners-Organisations/Learners).

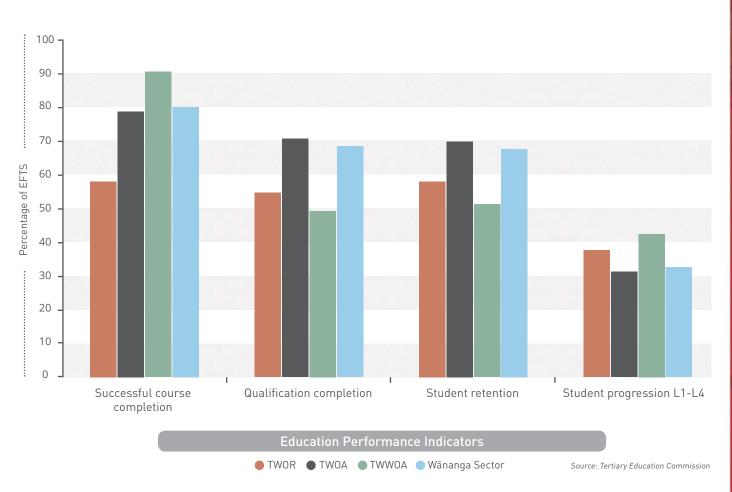


Figure 2.1 Educational performance indicators, 2011

• A smaller number of students progressed between qualifications at Levels 1-4, at 34 percent; however, 68 percent of students were retained in the sector to continue their studies.

The overall performance of the sector and that of the individual Wānanga is shown below.

In addition, the TEC in their performance report for the tertiary sector in 2011 noted that the Wānanga sector advanced the Government's Tertiary Education Strategy priorities by:

 Increasing the number of young people (aged under 25) achieving qualifications at Level 4 and above of the New Zealand Qualifications Framework (NZQF), particularly degrees.

• Increasing the number of Māori students enjoying success at higher levels.

- Increasing the number of Pasifika students achieving at higher levels.
- Increasing the number of young people moving successfully from school into tertiary education.
- \bullet Improving literacy, language, and numeracy skills outcomes from study at NZQF Levels 1-4. 6

The four EPIs, however, do not measure the contribution that individual Wānanga make as providers of Māori programmes within the education sector, nor do the EPIs acknowledge the contribution the Wānanga sector makes to promoting and growing Māori language, knowledge and culture. Wānanga are unique education providers because they are compelled to have regard to teaching and research that maintains āhuatanga Māori and tikanga Māori.⁷ This learning environment is a point of difference between Wānanga and other tertiary education providers, yet this difference is not acknowledged through the current EPI measures. These measures may therefore be too narrow for this sector, its environment and operations.

People choose to study in a Wānanga learning environment to enhance their skills and productivity, to improve their current and future job and career prospects; to increase their earning potential and to increase their knowledge about things Māori. Each of these factors impacts on the individual, their whānau and the community they live in. They also lead to economic growth, which in turn contributes to higher living standards.

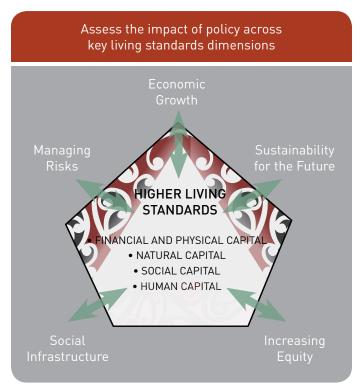
However, economic benefits are not the only driver behind investment in skills, education and training. People also choose to study in a Wānanga learning environment because this sector is focused on inter-generational, marae-centred learning, and te reo Māori and mātauranga Māori are central tenets of the activities of Wānanga.

2.2.3 Increase living standards

Living standards include health, social, environmental and cultural factors, as well as education and income. The New Zealand Treasury is developing a framework to inform efforts to increase living standards in New Zealand. The framework calls on a body of earlier research that highlights the limitations of using GDP alone in measuring wellbeing. Earlier work in the UN developed the Human Development Index, which combines measures of income, life expectancy and education. More recently, the OECD Better Life Initiative and its associated Well-being Framework incorporated various aspects of social and community outcomes, as well as acknowledging the importance of sustainability in the context of the outcomes for future generations in measuring economic progress.⁸

The Treasury framework uses five dimensions (or outcomes) to capture the impact (real and/or perceived) of policy changes on living standards. The five dimensions are economic growth; sustainability for the future; increasing equity; social infrastructure; and reducing risks. The four types of capital noted in this framework are financial and physical capital; natural capital; social capital; and human capital.

Figure 2.2 The Treasury Living Standards Framework



As noted in our previous section, the Wānanga sector is focused on the development of human and cultural capital as part of the investment in education and well-being. Mātauranga Māori – its maintenance, development and dissemination – is central to the activities of each Wānanga, and each operates according to the tikanga of its founding iwi.

The Treasury framework could therefore provide an additional means of measuring government investment in the Wānanga sector, as this framework indicates that the various elements of social capital, such as language and culture, have a value that can conceptually be quantified. This framework also indicates that investment by the Wānanga sector in the revival of Māori language and culture increases social infrastructure and living standards.

The long-term economic gains of the establishment of each Wānanga, and their provision of a Wānanga learning environment, is therefore more broadly encapsulated in their being the education arm of future iwi, hapū and whānau development, and their impact on higher living standards.

2.3 Summary

This section of our report has discussed the immediate economic gains to the national economy from spending by the Wānanga sector, and the broader impact the sector has on productivity and skills development. It has acknowledged that the Wānanga sector meets a market need, and that the provision of a Wānanga learning environment in the tertiary education sector provides a segment of the market with the opportunity to undertake training to which they would not otherwise have access.

The satisfaction of this market need can be observed through EPIs such as course and qualification completion rates, and students progressing to higher levels of study.

However, EPIs do not measure the contribution that individual Wānanga make as providers of Māori programmes within the education sector, nor do EPIs acknowledge the contribution the Wānanga sector makes to promoting and growing Māori language, knowledge and culture.

As discussed in the next section of our report, Wānanga are unique education providers because they are compelled to have regard to teaching and research that maintains āhuatanga Māori and tikanga Māori.⁹ This learning environment is a point of difference between Wānanga and other tertiary education providers, yet this difference is not acknowledged through the current EPI measures. These measures may therefore be too narrow for this sector, its environment and operations.

3 The establishment of Wānanga

This section of our report discusses the establishment of each Wānanga and their provision of a Wānanga learning environment in the tertiary education sector. This discussion focuses on the kaupapa, core purpose, and strategic direction of each Wānanga. It illustrates how Wānanga are unique because they are education providers that are compelled to have regard to teaching and research that maintains āhuatanga Māori and tikanga Māori.

In the next section of our report we discuss the student body, and the similarities and differences between individual Wānanga. This further illustrates how each institution is advancing their founding kaupapa and guiding principles through the provision of various courses and programmes of study that are steeped in te reo, tikanga and āhuatanga Māori.

It is this unique provision that has the greatest impact on the New Zealand economy and has increased the overall level of Māori participation and success in tertiary education.

3.1 Core role and government expectations

The core role and government expectations regarding Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi are outlined in their statutory responsibilities under the Education Act 1989.

A Wānanga is characterised under the Education Act 1989 by teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence, and assists the application of knowledge regarding āhuatanga Māori (Māori tradition) according to tikanga Māori (Māori custom).¹⁰

Te Wānanga o Raukawa and Te Wānanga o Aotearoa were given statutory recognition in 1993, while Te Whare Wānanga o Awanuiārangi was given statutory recognition in 1997 after being incorporated in February 1992. This statutory recognition followed the passage of the Education Act 1989.

Table 3.1 Core roles and expectations for Wananga, Education Act 1989

Provide quality education in accordance with kaupapa Māori philosophies, principles and approaches.

Undertake teaching and research that advance and disseminate knowledge, develop intellectual independence, and assist the application of knowledge regarding āhuatanga Māori and tikanga Māori.

Contribute to the survival and well-being of Māori as a people.

3.1.1 Distinct entities

Each Wānanga is distinct in its own right, and while some general observations may be said to apply to all, each operates very differently. It is important to acknowledge the distinct nature of Wānanga here, before discussing how each Wānanga was established, and what each deems as its core purpose.

• Wānanga have been established by iwi as independent institutions to meet the developmental needs of iwi and, through iwi, Māori generally.

• Each Wānanga enjoys the participation of all sectors of the iwi, from young members as students through to elders as both teachers and learners.

• Mātauranga Māori and its maintenance, development and dissemination are central to Wānanga activities.

• Each Wānanga operates according to the tikanga of the founding iwi, and is identifiably Māori in its environment and operations.

• The development of spiritual strength and depth among students is an integral part of the Wānanga programme.

• The Wānanga, as a whole, is guided, directed and controlled by Māori people. ¹¹

Each Wānanga in its establishment and subsequent management has demonstrated rangatiratanga – as tertiary education institutions they have been developed through the efforts of iwi to provide tertiary education in the first instance to their own people, in the second instance to Māori students, and in the third instance to anyone who wishes to embrace this particular form of education.

Create and share new Māori knowledge that contributes to whānau, hapū and iwi prosperity, and to New Zealand's economic, social, cultural and environmental development.

Make an increasing contribution to sector-wide leadership through advancing mātauranga Māori at all qualification levels and across all fields of study.

Enable students to complete a range of sub-degree, degree and postgraduate qualifications, with clear study paths to higher levels of learning through a Māori paradigm.

3.2 Establishment of Te Wānanga o Raukawa

Te Wānanga o Raukawa takes guidance and inspiration from the founding statement:

E kore au e ngaro, he kākano i ruia mai i Rangiātea

Te Wānanga o Raukawa was established in 1981 by the confederation of Te Āti Awa, Ngāti Raukawa, and Ngāti Toa Rangatira iwi. Its key purpose is to maximise the contribution to the survival of Māori as a people. The Wānanga is based in Ōtaki and has 26 sites throughout New Zealand. In 2012, there were 1,897 students enrolled, the equivalent of 1,335 EFTs, of which 94 percent identified as Māori.

The three iwi of Te Āti Awa, Ngāti Raukawa, and Ngāti Toa Rangatira are closely linked by whakapapa and are known as the ART confederation. Together, this confederation has undertaken many joint ventures.

Whakatupuranga Rua Mano – Generation 2000 is an iwi development plan that was launched by the Raukawa Marae Trustees in 1975 with a 25-year horizon. This development plan was initiated after growing concerns from the trustees about poor educational accomplishments among confederation members. For example, in 1975 the confederation had no one under the age of 30 who could converse in te reo Māori. Now there are approximately 800 descendants under the age of 30 who are able to make themselves understood in Māori, and they are able to understand the language. ¹²

The rejuvenation of marae and the development of hapū and iwi members to undertake formal roles on the marae was also a crucial area that needed development. The first degree introduced was the Bachelor of Māori and Administration.

 The Waitangi Tribunal. (1999). Modern W\u00e4nanga. The W\u00e4nanga Capital Establishment Report. The Waitangi Tribunal: Wellington.
 Winiata, P. Leaders Are Made Not Just Born - Planning for Leaders and Leadership succession. From Whakatupuranga Rua Mano – Generation 2000, Te Wānanga o Raukawa emerged with a focus on contributing to the survival of Māori as a people. This has been the focus of Te Wānanga o Raukawa since its inception, and the measures used to determine this (and their relevance) has not diminished over time.

These measures and the founding statement of Te Wānanga o Raukawa form the basis of the outcomes of the Wānanga:

- He taonga tō tātou reo Our reo is a taonga; halt the decline and revive.
- Ko te marae te kāinga matua The marae is our principal home; maintain and respect.
- Ko tātou anō tō tātou oranga Our people are our wealth; develop and retain.
- Mā tātou anō tātou e kuhu Self-determination.

Halting the decline and promoting the revival of te reo Māori is a central focus of activity within the ART confederation.

Te Reo Māori is a kaupapa of the Wānanga, and its revival is central to the academic pursuits of the Wānanga and all of its activities. "Te Reo Māori is valuable as the principal language for expressing tikanga and mātauranga Māori." ¹³

Further, by locating the activities of Te Wānanga o Raukawa on marae, students can access education locally. This is leading to the rejuvenation of marae through their redefinition as education centres, and the revitalisation of knowledge and concepts related to marae, including management, conflict resolution, arts and whakapapa.

3.2.1 Core purpose of Te Wānanga o Raukawa

The core purpose of Te Wānanga o Raukawa is to produce graduates who are Māori in the way they think, act and behave. The education model and framework that Te Wānanga o Raukawa uses enables Māori to be Māori in a contemporary society.

"Our core purpose is to maximise our contribution to the survival of Māori as a people through the expression of kaupapa tuku iho, which drives, guides and inspires us."¹⁴

Te Wānanga o Raukawa states that its contribution to the economy is enhanced by improving Māori health and wealth. A "successful education is one that lays down the foundation for a healthy lifestyle and a career with an income adequate enough to provide a high standard of living. We believe our contribution to the economy of Aotearoa is further enhanced by improving Māori health and wealth."

Te Wānanga o Raukawa students take longer to complete their qualifications as they undertake a prescriptive degree programme that includes a te reo Māori component. Currently, this component and learnings in regard to iwi and hapū is 30 percent of the graduate programme. Students learn about culture, whakapapa, history, and their iwi and hapū literature.

Ngā Kaupapa o Te Wānanga o Raukawa are the defining values of Te Wānanga o Raukawa, and they can be expressed in many ways.

• Manaakitanga – People at Te Wānanga o Raukawa endeavour to express manaakitanga, or mana-enhancing behaviour toward each other as staff and students, and to others, taking care not to trample on another person's mana. The concept of manaakitanga includes understanding tapu and mana, those special aspects of Māori which derive from their spiritual nature.

Staff and students express mana-enhancing behaviour such as fairness and generosity toward each other, taking care to show respect and consideration. In pōwhiri on the marae, for example, the objective is to deal with the tapu and mana of the tangata-whenua and manuhiri in an enhancing, positive way. In our relationships with others we are aware of mana, our own and theirs.

• Rangatiratanga – Rangatiratanga is the expression of the attributes of a rangatira (having chieftainship) including humility, leadership by example, generosity, altruism, diplomacy and knowledge of benefit to the people. It also means having a commitment to the community, using facts and honest information as well as legends and stories to make a case, relay a message or explain things in a way which binds people together, facilitating rather than commanding.

It is the fourth principle (self-determination) of Whakatupuranga Rua Mano. Te Wānanga o Raukawa acknowledges, aspires and encourages through the learning environment and in all of its activities, the rangatiratanga of individuals, whānau, hapū, and iwi. It understands the importance of walking the talk, following through on commitments made, manaakitanga, integrity and honesty.

• Whanaungatanga – Whanaungatanga is about being part of a larger whole, of the collective. Our people are our wealth. This system of kinship, including rights and reciprocal obligations, or utu, that underpin the social organisation of whānau, hapū and iwi should be part of the life of the institution. Māori are related to all living things and thus express whanaungatanga with their surroundings. Whanaungatanga is about knowing you are not alone, but that you have a wider set of acquaintances that provide support, assistance, nurturing, guidance and direction when needed. Interdependence with each other rather than independence is the goal. Defined roles for kaumātua, mātua, rangatahi, tāne and wāhine are also part of whanaungatanga.

• Kotahitanga-Kotahitanga involves developing and maintaining a unity of purpose and direction, and avoiding approaches and decisions that lead to division and disharmony. A commitment by the institution through oneness of mind and action to achieving its vision would be the expression of kotahitanga. All are actively encouraged to make their contribution, to have their say. What is best and appropriate for the institution will be agreed and determined collectively.

• Wairuatanga – An emphasis on the fostering of wairuatanga is a unique feature of the Wānanga. Wairuatanga is about understanding and believing that there is a spiritual existence for Māori in addition to the physical. The physical world is represented by te ao mārama, surrounded and connected to ngā rangi tūhāhā and ngā pō, the spiritual realms. The spiritual world is an important part of reality for Māori, which is integral to day-to-day activities and necessary for their successful endeavours. Māori represent and live these realms, having both a taha kikokiko and a taha wairua. Māori are intimately connected spiritually to their environment, maunga, awa, moana and marae, all of which have their own wairua. The wairua of a person requires nourishment as regularly as the tinana, and the forms of nourishment differ among people. The environs of Te Wānanga o Raukawa are nourishing and nurturing of the wairuatanga of staff and students.

 Ūkaipōtanga – Ūkaipōtanga is about having a sense of importance, belonging and contribution. It shows the importance of tūrangawaewae, te hau kāinga, and of people grounding themselves to the land and home. Through ūkaipō, Māori will find themselves, their strength and their energy. Having a place where you belong, where you count, where you are important and where you can contribute is essential for Māori well-being.

As a whole person with your identity intact, you can make your contribution. Te Wānanga o Raukawa is considered more than a place of employment. The benefits derived from people being stimulated in their work and study, feeling energetic, believing they are important and having a contribution to make are considerable. The presence of lwi and Hapū Studies as a generic programme of study highlights the importance of this kaupapa.

• Pūkengatanga – Te ako, te pupuri, te waihanga, teaching, preserving and creating mātauranga Māori and having recognised abilities in these areas is a reflection of pūkengatanga. Excellence in mātauranga Māori academic pursuits is fundamental to the purpose of the Wānanga.

This should not be to the exclusion of mātauranga drawn from other traditions, but the mātauranga Māori continuum is the priority and the focus at Te Wānanga o Raukawa.

Kaitiakitanga – Preserving and maintaining the existence, core capability and viability of Te Wānanga o Raukawa, so it can continue to fulfil its functions and duties, is the essence of this kaupapa. This kaupapa has several facets including: a) the preservation of taonga, e.g. te reo, tikanga, kōrero-ā-iwi;
b) ensuring quality and safety in all activities; c) maintaining prudent financial management policies and practices to ensure Te Wānanga o Raukawa does not encounter financial distress;
d) accountability to the founding iwi, Te Mana Whakahaere, and to the Crown. Financial well-being is but one aspect of this kaupapa. It is important for viability purposes; however, it will never be viewed as a primary motivator for Te Wānanga o Raukawa.

• Whakapapa – Whakapapa represents our common ancestry and history and the responsibility that we have to past and future generations. This responsibility can be a source of inspiration and motivation for all of the activities of the Wananga. It also provides the basis of a connection between all of the people involved in the work of the Wananga. This is essential to the Maori world view. As a people we trace our descent from te kore, to te pō and eventually through to te ao mārama, where we are grounded to Papatūānuku and look upwards to Ranginui. Māori descriptions of the creation, conception to childbirth, the growth of a tree and the acquisition of knowledge are all whakapapa-based recitals. Ranginui and Papatūānuku and their children are here and now, our tupuna are beside us. As such we become one with these ancient spiritual powers and carry out our role in creation and contribution to our future. This is whakapapa.

 Te Reo Māori – Te Reo Māori is valuable as the principal language for expressing tikanga and mātauranga Māori. Halting the decline and promoting the revival of te reo Māori has been a central focus for activity within the confederation of Te Āti Awa, Ngāti Raukawa and Ngāti Toa Rangatira for nearly four decades. As such, te reo Māori has been identified as a kaupapa of the Wānanga, and its revival central to the academic pursuits of the Wānanga and to all of its activities. Te reo Māori is the medium through which Māori articulate and communicate meaning and understanding about our world view.

The survival of our people as Māori will be enhanced if te reo Māori survives. We will not be able to maintain our uniqueness as a people without it. Our planning, policies, development, course proposals, and staff development have incorporated into them processes and facets that promote te reo Māori and ensure its survival within this institution and among our people.

3.2.2 Kia Māori ā tātou Mokopuna

The Kaupapa-Tikanga Matrix is a self-assessment tool that has guided Te Wānanga o Raukawa for 10 years. This tool and its associated framework measure activities undertaken by Te Wānanga o Raukawa, and consider how these activities are accountable to tikanga Māori and perform against the inherent values of the Wānanga. In 2012, Te Wānanga o Raukawa adopted a new vision statement, **Kia Māori ā tātou Mokopuna.** This vision statement:

• Preserves the intent of the Whakatupuranga Rua Mano iwi development plan in that it looks to the next generation and beyond.

• Is an adaptation of a related strategy, Kia Māori 24/7:2040.

• Captures the purpose of Te Wānanga o Raukawa to focus on the needs of our people and to contribute to the survival of Māori as a people.

• Reaffirms the Māori model and the goal to produce Māori graduates competent in their ability to think and behave as Māori.

• Elevates the importance of inter-generational intervention in education.

• By implication, reaffirms the place of te reo and iwi and hapū students in our provision. ¹⁶

Te Wānanga o Raukawa has collaborative relationships with other tertiary education providers, namely Whitireia New Zealand and Nelson-Marlborough Institute of Technology. These relationships allow joint qualification delivery, and are assisting Te Wānanga o Raukawa to decrease the average age of our students. This is particularly important as the student profile influences current curriculum content and future developments.

Te Wānanga o Raukawa is also investing in infrastructure to support learners in a blended learning environment. Providing te reo courses using a local iwi radio station, ReoFM, has been the first step in delivering reo papers online and on the radio.

3.3 Establishment of Te Wānanga o Aotearoa

The following vision is a guiding principle of Te Wānanga o Aotearoa:

Ki te whakawhiwhi i ngā mea angitū, ā, i ngā akoranga katoa tino teitei me ngā Māori me ngā iwi o Aotearoa me te ao

Te Wānanga o Aotearoa was established in Te Awamutu as the Waipā Kōkiri Arts Centre and later Aotearoa Institute. This centre was established by Rongo Wetere and Iwi Kohuru (Boy) Mangu.

The centre was originally established to be a 'marae of learning' and an educational alternative for the large number of predominantly Māori students who were being expelled from Te Awamutu College at this point in time. The resulting structure, O-Tāwhao Marae, was opened on 26 April 1985.

In 1984, Mr Wetere led a project to create the Waipā Kōkiri Arts Centre. The centre would provide further educational opportunities for those involved in the O-Tāwhao Marae project and engage others in the community who had no qualifications. On completion, government funding enabled the centre to expand its programmes from whakairo (carving), raranga (weaving) and te reo Māori to include office administration, computer technology studies and trades training programmes in building and plumbing.

The centre also became involved in community projects, including renovating marae throughout the country and producing carving and weaving to adorn these buildings.

During the 1980s, the kaupapa of the Waipā Kōkiri Arts Centre was to increase Māori participation in tertiary training, particularly for those without qualifications. With travel a major barrier for many, campuses were opened in other areas such as Te Kūiti, Hamilton and Manukau. A central aim of operating in these smaller communities was to bring employment to areas that had high unemployment.

In 1987, Dr Buck Nin and Mr Wetere advanced the concept of creating a tertiary education institute, or wānanga. In 1988, the pair submitted an application to the Ministry of Education and the following year the Government changed the Education Act to recognise Wānanga as tertiary education institutions. In 1989, Waipā Kōkiri Arts Centre changed its name to Aotearoa Institute. Aotearoa Institute gained statutory recognition as a Wānanga in 1993, and in 1994 Aotearoa Institute changed its name to Te Wānanga o Aotearoa to reflect this change in status.

In 2012, there were 32,370 students enrolled of which 41 percent identified as Māori.

3.3.1 Core purpose of Te Wānanga o Aotearoa

The core purpose of Te Wānanga o Aotearoa is to equip people with "the knowledge of our heritage, our language, and our culture so that they can handle the world at large with confidence and self-determination." ¹⁷ Te Wānanga o Aotearoa states that it provides education that best fits the aspirations of this generation, enhances the dreams of future generations, and prepares for understanding the essence of past generations. ¹⁸

The aim of Te Wānanga o Aotearoa is to provide for the needs of students and support them to achieve educational success that leads to academic fulfilment and meaningful employment. As part of this support, Te Wānanga o Aotearoa offers an inclusive learning environment grounded in Māori values, where as many programmes and study options as possible are offered to allow students to organise their study around work, family and lifestyle commitments.

3.3.2 Te Rautakinga 2011-2030

Te Rautakinga 2011-2030 is the strategic plan of Te Wānanga o Aotearoa. This plan defines goals and targets for two timeframes, 2015 and 2030. The first timeframe is 2030, and this long-term view lists the attributes that will describe the organisation in the year 2030. These attributes include:

• Te Wānanga o Aotearoa is steeped in te reo, tikanga and āhuatanga Māori with a worldwide reputation for creative and innovative approaches to indigenous learning and understanding.

• Te Wānanga o Aotearoa is a current, agile and financially sustainable organisation with significant independent funds to further its mission.

• Te Wānanga o Aotearoa has contributed to the critical thinking, learning agility, spiritual intelligence, emotional intelligence and analytical skills of its students. • Te Wānanga o Aotearoa creates and uses innovative educational models to support cradle-to-cradle education.

- Māori well-being has improved significantly as a result of our programmes, with Māori employment rates, income levels, and health and lifestyle measures greater than the national average.
- Māori seek out our freely-accessible Māori programmes alongside other peoples of Aotearoa who value living in a Māori culturally aware, respectful and sharing nation.
- Te Wānanga o Aotearoa is a leading-edge Māori and indigenous research organisation and a recognised repository for mātauranga Māori.
- Achievement rates among our students surpass all other tertiary institutions and our graduates are respected and sought after in the community and in the public and private business sectors.
- Te Wānanga o Aotearoa respects Papatūānuku in urban and natural settings and seeks opportunities to rejuvenate our environment to create a sustainable future for our tamariki and mokopuna.
- Te Wānanga o Aotearoa has strategic relationships with iwi and other stakeholders that include equity investments in collaborative ventures resulting in positive outcomes for Māori and peoples of Aotearoa.¹⁹

The second timeframe is 2015, and this short-term view lists goals that will inform measurable targets to be achieved by 2015. These goals are:

- To maintain, enhance and advance our kaupapa with a portfolio of provision that meets the needs of our people.
- To establish and maintain a culture of excellence and an energetic environment utilising the wisdom of our tūpuna.
- To position our graduates and the organisation for success and to be a respected leader within the education sector.
- To be a permanent and economically viable organisation leveraging mātauranga Māori of the past, now and into the future.²⁰

3.4 Establishment of Te Whare Wānanga o Awanuiārangi

Te Whare Wānanga o Awanuiārangi is a Whare Wānanga or House of Higher Learning. The term "Whare" in its title is distinctive in the Wānanga sector as it embraces the original aspiration to provide high-quality education opportunities at all levels of tertiary teaching and research. It is focused on promulgating mātauranga Māori and other bodies of indigenous knowledge and advancement through 'transformation', in support of Māori and indigenous advancement. This intention is further articulated in the mission statement for Te Whare Wānanga o Awanuiārangi:

Rukuhia te Mātauranga ki tōna hohonutanga me tōna whānuitanga

Pursue knowledge to its greatest depths and its broadest horizons

Distinguished Professor Sir Sidney Mead (Hirini Moko) was the inspiration behind the establishment of Te Whare Wānanga o Awanuiārangi. Distinguished Professor Mead wanted to establish a Wānanga to provide advanced education for the people of Ngāti Awa and Mātaatua. This idea was first mooted in 1987 and Te Whare Wānanga o Awanuiārangi was established in 1991 by Te Rūnanga o Ngāti Awa and incorporated on 11 February 1992. Te Whare Wānanga o Awanuiārangi was statutorily recognised as a Wānanga on 1 January 1997. In 2012, there were 6,722 students enrolled of which 91 percent identified as Māori.

The name 'Awanuiārangi' is linked to the whakapapa of the Mātaatua canoe, which landed at Whakatāne.

Many tribal groups claim descent from the Mātaatua canoe and the ancestor Awanuiārangi, among them Te Whānau-ā-Apanui, Whakatōhea, Tūhoe, Ngāti Awa, Ngāti Whare, Ngāi te Rangi and Ngā Puhi. Although Awanuiārangi has strong links to the people of Mātaatua, the Wānanga provides educational opportunities to all.

Te Wānanga o Aotearoa. (2011). He Whakamahukitanga 2011. Wānanga o Aotearoa. Te Awamutu
 Ihid.

3.4.1 Core purpose of Te Whare Wānanga o Awanuiārangi

A vision of Te Whare Wānanga o Awanuiārangi is to be a quality provider of Māori programmes within the tertiary education sector. Of importance to this vision is the promotion, growth and sustainability of Māori language, knowledge and culture in all its manifestations and with regard to tikanga Māori.

As part of the 360-degree Māori Education Development Model developed by Te Whare Wānanga o Awanuiārangi, Awanuiārangi recognises the importance of the educational experiences of wider family members, particularly the influence of parents on the educational success of children. It argues there is a particular need to provide ongoing support to Māori parents, as parents in tertiary study are a role model for their children.

"We commit ourselves to explore and define the depths of knowledge in Aotearoa, to enable us to re-enrich ourselves, to know who we are, to know where we came from and to claim our place in the future."

.....

Cultural citizenship is a key educational performance indicator for Te Whare Wānanga o Awanuiārangi. Students need to achieve academic success and to develop skills to enable them to be excellent iwi/ Māori citizens with the language and cultural skills that enable them to more fully participate in Māori society and cultural life. It is not an either/or choice for Te Whare Wānanga o Awanuiārangi students. This dual outcome of excellence in world knowledge and Māori knowledge is a key intention of Te Whare Wānanga o Awanuiārangi.

Te Whare Wānanga o Awanuiārangi programmes are accredited across all levels of the New Zealand Qualification Framework. One of the points of difference for Te Whare Wānanga o Awanuiārangi is that it offers two doctoral programmes, PhD and a Professional Doctorate, and is engaged in research activities and outputs. These activities are aligned to create academic benchmarks for Awanuiārangi and its vision for the delivery of more graduate programmes, and a commitment to be research active for the benefit of students, academic programmes and Māori communities.

Te Whare Wānanga o Awanuiārangi also has an international strategy and a number of international memoranda of understanding. This international strategy provides

opportunities for students to be more academically competent in the international arena. Some degree programmes offered at Te Whare Wānanga o Awanuiārangi are sought-after by international universities or indigenous institutions, and Awanuiārangi graduate students are taking up places in other degree programmes overseas. These advances help to raise the profile of both Awanuiārangi and New Zealand as a whole.

3.4.2 360-Degree Māori Education Development Model

Te Whare Wānanga o Awanuiārangi has developed a range of programmes that are uniquely positioned to advance Māori higher-end credentials and learning. This success has been developed through the application of innovative pedagogy and curriculum design.

The institutional focus is on transforming praxis, that is, the development and application of kaupapa Māori theoretically informed practices. These approaches build on and extend the theoretical work of kaupapa Māori scholars (many of whom are employed at Awanuiārangi). These approaches put the validity and legitimacy of Māori language, knowledge, culture and practice as a central component of their transforming intention. In this perspective, positive cultural reinforcement and success is seen as an important conduit to learning success more broadly. This is in fact the essence of the Ministry of Education's current policy emphasis on 'Māori being able to succeed as Māori', and also connects to the legislated requirement on the Wānanga sector, which is embedded in the Education Amendment Act 1990.

Te Whare Wānanga o Awanuiārangi has built on the kaupapa Māori model of transforming praxis as the '360-degree Māori Education Development Model'. This holistic model explicitly engages in transforming approaches within multiple sites using multiple strategies that are often simultaneously applied. This holistic approach requires a change of mind set and practice and it challenges the current government funding emphasis of developing policy and practice that are 'singular', 'one-off', and 'project'-based initiatives.

Te Whare Wānanga o Awanuiārangi accepts that many of these current strategies are having limited success in overcoming the 'learning gap' that affects large numbers of Māori. Awanuiārangi therefore needs to do things differently and not continue with the same strategies and practices that have proved to be ineffective. Te Whare Wānanga o Awanuiārangi has therefore deliberately reshaped its institutional approach to intervention based on two key understandings:

• That there will not be a sustainable socio-economic revolution for Māori without a prior or simultaneous educational revolution.

• That the potential for intervention must move beyond singular, one-off project strategies.

This multi-strategic approach to intervention 'in and through' education and school is an innovative and unique approach. It has emerged out of the context of experience within Te Whare Wānanga o Awanuiārangi. It is an approach that is concerned to respond to cultural, iwi, rural, socio-economic, learning, marae and vocational aspirations of Māori.

The strategic goals of Te Whare Wānanga o Awanuiārangi are:

• To ensure Te Whare Wānanga o Awanuiārangi is a financially viable and sustainable institution.

• To provide opportunities for Ngāti Awa, Mātaatua, other iwi, all New Zealanders and international students to participate in education that contributes to the prosperity of whānau, hapū and iwi, and to economic, social, cultural, community and environmental development.

 To increase the level of Māori participation and success at higher levels in the tertiary education sector and assist students to strive toward te höhonutanga me te whānuitanga o te mātauranga (depth and breadth of knowledge).

• To contribute to the survival and well-being of Māori through unique programmes taught in a kaupapa Māori framework.

• To ensure qualifications achieve the same reputation for quality as those from other quality institutions by developing and maintaining a high-quality learning environment anchored by āhuatanga, tikanga, and mātauranga Māori.

• To carry out research of the highest quality that is transformative for students, communities, Māori and indigenous people, and contributes to national and international research on indigenous development, and to understand and communicate its relevance and application in the Māori economy. • To work collaboratively with other organisations to support the emergence of effective Māori members of the community who are equipped with skills and knowledge from both world views to ensure they and their communities make a contribution to wider society.

3.5 Summary

This section of our report has discussed the establishment of each Wānanga, their founding principles and guiding kaupapa. It is important to acknowledge the distinct nature of Wānanga, how each Wānanga was established and what each deems as its core purpose. It is also important to acknowledge the similarities between the Wānanga as well as the core role and government expectations according to their statutory responsibilities under the Education Act 1989. Each of these roles and expectations ties to the student body, and how each institution is advancing its founding kaupapa and guiding principles through the provision of various courses and programmes of study.

4 Wānanga student body

This section of our report provides a profile of the Wānanga sector, particularly the student body. It illustrates the similarities and differences between individual Wānanga, and how each institution is advancing its founding kaupapa and guiding principles through the provision of various courses and programmes of study that are steeped in te reo, tikanga and āhuatanga Māori, and investment in Wānanga staff and infrastructure that supports students in a variety of learning environments.

4.1 Te Wānanga o Raukawa

Te Wānanga o Raukawa was established in 1981 by the Confederation of Te Āti Awa, Ngāti Raukawa and Ngāti Toa Rangatira iwi. Its key purpose is to maximise the contribution to the survival of Māori as a people. The wānanga is based in Ōtaki and has 26 sites throughout New Zealand.

In 2012, there were 1,897 students enrolled, the equivalent of 1,335 EFTs. Approximately 5 percent of all students enrolled in the Wānanga sector were enrolled at Te Wānanga o Raukawa in 2012. Approximately 72 percent of those students studied part-time.

Programmes offered

Te Wànanga o Raukawa has five academic whare, all of which offer a range of certificate, undergraduate and postgraduate degree programmes attractive to iwi based organisations and others. These include whakaakoranga (teaching), toiora whanau (social health and wellbeing), kaitiakitanga putaiao (ecosystems), kawa oranga (lifestyle advancement and physical wellbeing), hiko-rau (audio/visual, animation and graphic design), whare tapere (performing arts), puna maumahara (maintenance and management of knowledge systems), karanga, whaikorero, mātauranga Māori, tupunga hapū (hapū development), toi whakarakai (visual arts), toko mana (administration), whakahaere (management) and kaute (accounting).

As an alternative to studying at its Otaki campus, Te Wānanga o Raukawa also delivers some of its programmes at maraebased sites for people who would like to be taught 'at home by people from home'.

Iwi and hapū studies and te reo Māori studies are 60 percent of the content of most qualifications offered by Te Wānanga o Raukawa. Iwi and hapū studies papers include Māori language, history studies, biographies, art, oral history interviews, marae studies and literature studies. These studies are central to Te Wānanga o Raukawa providing education that supports and enhances te ao Māori, and this Wānanga is the only tertiary provider in New Zealand that offers this subject in-depth.

Field of study/programme

Society and culture was the most common subject area among Te Wānanga o Raukawa students enrolled in 2012, at 52 percent. The second most common study area was creative arts, with 23 percent of students enrolled in this broad subject area.

Smaller numbers were enrolled in information technology programmes, and in health and education subject areas. Three teaching degrees are offered and recognised by the New Zealand Teachers Council. Te Wānanga o Raukawa also offers a social work qualification that provides graduates with the opportunity to register with the Social Work Registration Board on completion of their studies. Many of these students are already in employment in the relevant industry, and higher-level study enables them to further their careers through registration.

Level of study

In 2012, 32 percent of Te Wānanga o Raukawa students were studying for a Level 3 certificate, 5 percent for a Level 4 certificate, 35 percent for diplomas, 20 percent for a bachelor's degree, and 8 percent for a postgraduate qualification.

Qualification completions

In 2011, 900 Te Wānanga o Raukawa students completed a qualification:

- 90 percent completed a non-degree qualification.²¹
- 7 percent of students completed a bachelor degree.
- 3 percent completed a postgraduate qualification. ²²

Information on graduates

Student satisfaction surveys conducted during the study year indicate a high level of satisfaction with the facilities and programmes offered by Te Wānanga o Raukawa.

Age and sex

The largest student cohort at Te Wānanga o Raukawa in 2012 was students aged between 25 and 40 years old. In 2012, approximately 53 percent of students were in this age group. This was followed by students in the 20 to 24 age group (23 percent). Approximately 10 percent of students were 40 years or older. This age profile is relatively younger than the sector, whereby an estimated 83 percent of students are older than 24, and just 16 percent are between 18 and 24 years old.

In 2012, 72 percent of students enrolled at Te Wānanga o Raukawa were female. This trend is similar to what can also be observed across the Wānanga sector as a whole.

Ethnicity

Almost 94 percent of the student population at Te Wānanga o Raukawa identified themselves as Māori in 2012. This is followed by Europeans with 5 percent. Approximately 1 percent of students identified themselves as Pasifika.

Prior activity

In 2012, 45 percent of Te Wānanga o Raukawa students were in the workforce – either in employment or selfemployed – prior to enrolling in study. In addition, 1 in 4 students were previously beneficiaries or at home caring for others prior to enrolling.

Of those who were students prior to enrolling at Te Wānanga o Raukawa, 17 percent were in high school while 11 percent came from other parts of the tertiary education sector.

Prior qualifications

In 2012, 34 percent of Te Wānanga o Raukawa students did not have a secondary school qualification, and 19 percent had NCEA Level 1 or an equivalent qualification. This means 53 percent of Te Wānanga o Raukawa students had not achieved NCEA Level 2 or higher prior to studying at the Wānanga.

4.2 Te Wānanga o Aotearoa

In 2012, 32,370 students were enrolled at Te Wānanga o Aotearoa across their six main service centres. These centres are Tāmaki Makaurau/Te Tai Tokerau in the Auckland and Northland regions, Tainui in the Waikato region, Waiariki in the Bay of Plenty region, Whirikōkā in the East Coast/ Poverty Bay area, Papaiōea in the central North Island, and Te Tai Tonga, which is the service centre for the Wellington region and the South Island.

In addition, Open Wānanga is a wholly owned subsidiary of Te Wānanga o Aotearoa. Open Wānanga is nationwide and had an estimated 11,330 students in 2012. These students undertake homebased learning.

The number of students choosing to study at Te Wānanga o Aotearoa varies annually. This is because some students undertake 18-week courses while others undertake three years of study.

Programmes offered

Te Wānanga o Aotearoa currently offers programmes across eight areas at a certificate, diploma, degree and postgraduate level. These programmes are Tūāpapa (foundation), Te Reo Rangatira (Māori language), Angitū (Māori and Indigenous People's Development), Te Arawhānui (Business, Computing and Innovation), Hauora (health and fitness), Toi (Māori and Indigenous Art), Te Hiringa (education and social services), and Umanga (professional skills, trades and vocations).

• Within the certificate-level programmes there are six key areas. These are foundation programmes, sports and fitness programmes, mātauranga Māori programmes, computing and business programmes, and vocational programmes.

• At a diploma level there are four key areas. These are arts programmes, mātauranga Māori programmes, computing and business programmes, and education programmes.

• At a degree and postgraduate level the programmes offered are the Masters in Applied Indigenous Knowledge, Bachelor of Māori Visual Arts, Bachelor of Education (Primary Teaching), Bachelor of Education (Adult Education), Bachelor of Social Work and Graduate Diploma in Professional Supervision.

Field of study/programme

Society and culture was the most common subject area among Te Wānanga o Aotearoa students enrolled in 2012, at 54 percent. The second most common study area was management and commerce, with 26 percent of students enrolled in this broad subject area. Smaller numbers were enrolled in the subject areas of creative art, health and education.

Level of study

In 2012, the largest numbers of Te Wānanga o Aotearoa students (39 percent) were enrolled in Level 2 certificates. Another 24 percent were studying for a Level 4 certificate, with another 17 percent of students studying for a Level 3 certificate. Altogether 93 percent of Te Wānanga o Aotearoa students are enrolled in a Level 1-4 certificate qualification. Out of the remaining 7 percent of the Te Wānanga o Aotearoa student body in 2012, 4 percent were studying for a diploma qualification, while the last 3 percent of students were enrolled in a bachelor degree.

Qualification completions

In 2011, 17,080 Te Wānanga o Aotearoa students completed a qualification. The largest number of Te Wānanga o Aotearoa students (16,700 or 98 percent) completed a non-degree qualification.²³ The remaining 380 Te Wānanga o Aotearoa students or 2 percent of students completed a bachelor degree.

Information on graduates

Te Wānanga o Aotearoa graduates surveyed in 2013, after they completed a qualification in 2012, were happy with their programmes of study.

- 95 percent of surveyed graduates said they would recommend their programme to others and 91 percent said they would recommend their programme to their whānau.
- 36 percent had gained more responsibility in their community, while 22 percent had gained additional responsibility in employment.
- 10 percent of surveyed graduates had gained employment as a result of their studies.

Stakeholders who were also surveyed during this period noted that they were satisfied or extremely satisfied with the qualifications and reputation of Te Wānanga o Aotearoa. In addition, 66 percent of stakeholders said they were extremely satisfied, quite satisfied or somewhat satisfied with the quality of their relationship with Te Wānanga o Aotearoa.

Age and sex

Of those 32,370 students in 2012, approximately 71 percent were female. This trend of more female than male students has been observed at Te Wānanga o Aotearoa since 2000. This trend can also be observed across the Wānanga sector as a whole.

The largest student cohort at Te Wānanga o Aotearoa is students aged 40 years and older. In 2012, approximately 53

percent of students were over the age of 40. This is followed by students in the 25 to 39 age group. Only 14 percent of students at Te Wānanga o Aotearoa in 2012 were between 18 and 24 years old.

Ethnicity

Almost 48 percent of the student population at Te Wānanga o Aotearoa identified themselves as Māori in 2012. This is followed by Europeans with 35 percent. Approximately 13 percent of students identified themselves as Asians, and 8 percent as Pasifika.

Prior activity

This age profile is further confirmed when we consider the prior activities of these students. In 2012, 51 percent of Te Wānanga o Aotearoa students were in the workforce – either in employment or self-employed – prior to enrolling in study. In addition, 30 percent of students were not in the workforce – either at home or receiving a benefit – and 16 percent of students had come from other parts of the tertiary education sector to enrol at this Wānanga. Only a small percentage of students had moved from overseas or school to take up study at Te Wānanga o Aotearoa.

Prior qualifications

In 2012, 34 percent of students had not previously achieved a secondary qualification. Between 2008 and 2012, this number has fluctuated from 38 percent in 2008/2009 to 31 percent in 2011. In addition to this, 15 percent had NCEA Level 1, meaning that 49 percent of Te Wānanga o Aotearoa students in 2012 had not achieved NCEA Level 2 prior to studying at Te Wānanga o Aotearoa. Approximately 13 percent of Te Wānanga o Aotearoa students had university entrance prior to studying at Te Wānanga o Aotearoa. Out of the remaining 18 percent of students, 13 percent have come to Te Wānanga o Aotearoa with an overseas qualification.

Youth initiatives

As discussed in the previous section, the largest student cohort at Te Wānanga o Aotearoa is students aged 40 years and older, followed by students in the 25 to 39 age group. However, Te Wānanga o Aotearoa was originally established to raise the educational achievement of youth. in 2012 only 14 percent of students at Te Wānanga o Aotearoa were between 18 and 24 years of age. To change this profile a series of youth initiatives were established.

These include:

• Taikākā, an alternative education programme for students aged 13 to 15 years old who have become disengaged from their secondary schooling. This initiative is run in partnership with secondary schools, and students either successfully return to school or enrol in a tertiary institution at the end of the programme.

- Māori trades training, in partnership with Wintec and Waikato-Tainui Tribal Development Unit.
- Ākina, and the various STAR programmes that are offered at Te Wānanga o Aotearoa.
- Youth Guarantee programmes in sports or computing/ business administration.

• Tai Wānanga in Hamilton and Palmerston North has places for up to 120 youth aged between 13 and 18 years old.

In addition, Te Wānanga o Aotearoa offers day courses for students enrolled in secondary schools and full-time youth learning facilities. These initiatives aim to engage with youth and their learning.

Te Wānanga o Aotearoa is focused on creating opportunities for people whose needs have not been met by mainstream education. It aims to:

- Provide opportunities for rangatahi to experience tertiary education in multiple contexts prior to enrolling.
- Offer qualifications that attract priority learners
- Maintain a low- or no-fees approach to eliminate financial barriers to engagement.
- Maintain national delivery with multiple delivery options (face-to-face, noho, and home-based learning).
- Deliver a wide range of qualifications at NQF Levels 1 to 3 to help re-engaged learners and build confidence.
- Provide clear and continuous programme pathways from foundation through to degree-level study.

4.3 Te Whare Wānanga o Awanuiārangi

In 2012, there were 6,722 students enrolled at Te Whare Wānanga o Awanuiārangi, the equivalent of 3,409 Total EFTS (2,906 SAC Funded EFTS). Approximately 16 percent of all students enrolled in the Wānanga sector were enrolled at Te Whare Wānanga o Awanuiārangi in 2012 with 80 percent of programmes delivered at Level 4 and above.

Te Whare Wānanga o Awanuiārangi has its main campus in Whakatāne. Te Whare Wānanga o Awanuiārangi has three schools: The School of Indigenous Graduate Studies, the School of Undergraduate Studies and the School of Iwi Development (who engage with over 300 Marae over a 3 year cycle) and 5 National Institutes (Te Whare Mātauranga Māori: The National Institute for Māori Education, Te Pourewa Arotahi: The Institute for Post-Treaty Settlement Futures, Te Whare Taiao: The Institute for Indigenous Science, Tokorau: The Institute for Indigenous Innovations and The National Institute for Māori and Indigenous Performing Arts).

Programmes offered

Te Whare Wānanga o Awanuiārangi offers programmes from Community Education, Level 1 to 4 certificates, diplomas, degrees and postgraduate level. Te Whare Wānanga o Awanuiārangi is focussed on 10 curriculum disciplines:

- Education
 To Poo Māor
- Te Reo Māori/Mātauranga Māori
- Māori Studies
- Indigenous Studies
- Business Management
- Humanities
- Environmental Studies
- Health Sciences
- Performing Arts
- Creative Arts

Field of study/programme

Society and culture was the most common subject area among Te Whare Wānanga o Awanuiārangi students enrolled in 2012, at 48 percent. This subject area includes teacher education, and indigenous and Māori studies. The second most common study area was creative arts, with 22 percent of students enrolled in this broad subject area. This study area includes performing arts, tourism, design and innovation. Smaller numbers were enrolled in management and commerce programmes, and programmes that focus on agriculture and the environment.

Level of study

In 2012, the largest numbers of Te Whare Wānanga o Awanuiārangi students (58 percent) were enrolled in Level 4 certificates. Another 19 percent were studying for a bachelor degree, with another 18 percent of students studying for a Level 3 certificate.

Of the remaining 5 percent of the Te Whare Wānanga o Awanuiārangi student body in 2012, 3 percent were studying for a postgraduate qualification, and the last 2 percent were enrolled in Level 1 or 2 certificates.

Among those students enrolled in postgraduate qualifications, a growing area of study is indigenous studies. Te Whare Wānanga o Awanuiārangi currently offers four programmes at postgraduate level: two Masters Degrees, the Doctor of Philosophy, and a Professional Doctorate with options in either Māori or Indigenous Studies.

Qualification completions

In 2011, 1,979 students (1,603 EFTS) at Te Whare Wānanga o Awanulārangi completed a qualification.

- 83 percent completed a non-degree qualification. ²⁴
- 16 percent completed a bachelor degree.
- 1 percent completed a postgraduate qualification.²⁵

Age and sex

The largest student cohort at Te Whare Wānanga o Awanuiārangi in 2012 was students aged 40 years and older. In 2012, approximately 39 percent of students were in this age group. This was followed by students in the 25 to 29 age group (32 percent). Approximately 15 percent of students were between 20 and 24 years old.

Looking at the ages of students across the Wānanga sector, this profile is fairly typical. An estimated 83 percent of Wānanga students were older than 24 in 2012, while 16 percent were between 18 and 24 years old.

In 2012, 61 percent of students enrolled at Te Whare Wānanga o Awanuiārangi were female. This trend can also be observed across the Wānanga sector as a whole.

Ethnicity

Almost 91 percent of the student population at Te Whare Wānanga o Awanuiārangi identified themselves as Māori in 2012. This is followed by Europeans with 5 percent. Approximately 1 percent of Te Whare Wānanga o Awanuiārangi students identified themselves as Asians, and 3 percent as Pasifika.

Prior activity

In 2012, 50 percent of Te Whare Wānanga o Awanuiārangi students were in the workforce – either in employment or selfemployed – prior to enrolling in study. In addition, 32 percent of students were not in the workforce – either at home or receiving a benefit.

5 percent of Te Whare Wānanga o Awanuiārangi students were in high school prior to enrolling in tertiary study, while 8 percent of students had come from other parts of the tertiary education sector to enrol at Te Whare Wānanga o Awanuiārangi.

Prior qualifications

In 2012, 42 percent of students had not previously achieved a secondary qualification. In addition to this 12 percent have NCEA Level 1, meaning that 54 percent of Te Whare Wānanga o Awanuiārangi students in 2012 had not achieved NCEA Level 2 prior to studying at Te Whare Wānanga o Awanuiārangi.

• 17 percent of Te Whare Wānanga o Awanuiārangi students in 2012 had NCEA Level 2 or 3, while another 7 percent had university entrance prior to studying at Te Whare Wānanga o Awanuiārangi.

• The remaining 20 percent of students enrolled in 2012 had an unknown prior qualification, which means it is possible that the percentage of students with less than an NCEA Level 2 qualification could be higher.

4.4 Summary

In 2012, 40,989 students were enrolled and studying with Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi. The largest Wānanga was Te Wānanga o Aotearoa with 32,370 students or 79 percent of the student body.

Approximately 35 percent of the students at Wānanga had no secondary school qualification prior to beginning their study, while 25 percent had NCEA Level 1 or 2, and seven percent had an NCEA Level 3 qualification. In addition, 51 percent were employed or self-employed prior to undertaking their study at a Wānanga, and 20 percent of students were beneficiaries or not in employment.

As a group, Wānanga students tend to enrol part-time and be older than the average tertiary student cohort. In 2012, 52 percent of students were aged over 40, and 56 percent were enrolled part-time.²⁶

5 Tertiary student body

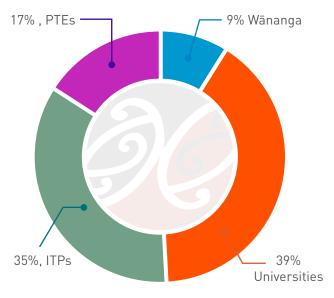
This section of our report discusses 2012 tertiary student data and information. This overview illustrates the similarities and differences between students and staff at Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, and other parts of the tertiary education sector.

5.1 Student enrolments

In 2012, an estimated 422,450 students were enrolled in tertiary education in New Zealand. The majority of tertiary students were domestic students, at 89 percent of the total student population.

Enrolments in tertiary education organisations are shown in Figure 5.1. Large numbers of students are enrolled in universities, institutes of technology and polytechnics. Other large areas of enrolment are private training establishments followed by Wānanga.

Figure 5.1 Tertiary student enrolments, 2012



Source: Education Counts

In 2012, 86,639 Māori students were enrolled in tertiary education. 25 percent of all Māori Students are enrolled within the Wānanga sector. The majority of these students, 39 percent, were enrolled in Level 1 to 3 Certificates. As shown in Table 5.1, the number of enrolled students decreases as the qualification level increases up to Level 7. However, at the bachelor degree level student enrolments increase to 17,635. Approximately 5 percent of Māori students were enrolled in higher levels of study (i.e. graduate certificates/ diplomas to doctoral degrees) in 2012.

Table 5.1 Māori student enrolments, 2012

Qualification level	Student enrolments	%
Certificates 1-3	33,849	39.1
Certificates 4	19, 663	22.7
Diplomas 5-7	10,730	12.4
Bachelors	17,635	20.4
Graduate certificates/ diplomas	928	1.1
Honours and postgraduate certs/dips	2,063	2.4
Masters	1,321	1.5
Doctorates	450	0.5
Total	86, 639	100.0

Source: Education Counts

5.2 Prior qualifications and activities

The highest qualification held and the prior activity of students studying at Wānanga is markedly different from those students in other sections of the tertiary education sector.

The majority of students studying at universities and ITPs were school leavers in 2012 who had NCEA Level 2 or 3 as their highest prior qualification. In contrast, 35 percent of Wānanga students had no formal secondary school qualification when they undertook tertiary study, while approximately 12 percent had NCEA Level 3, bursary or a scholarship.

• Approximately 26 percent of tertiary students had NCEA Level 3, bursary or a scholarship qualification prior to beginning their study.

• NCEA Level 2 or Sixth Form Certificate was the second most

common prior qualification held, with 13 percent of students holding this qualification prior to beginning their study.

• However, 35 percent of all tertiary students had no formal secondary school qualification when they undertook tertiary study, while 3 percent had NCEA Level 1 or School Certificate as their highest secondary school qualification.

In 2012, 25 percent of students studying at Wānanga had a NCEA Level 1 or 2 prior to beginning their study, while only 7 percent had an NCEA Level 3 qualification. Overall, this figure indicates that 74 percent of Wānanga students had a Level 2 qualification or less prior to undertaking study.

The difference between the prior qualifications of students in the Wānanga sector and at other tertiary providers is shown in Figure 5.2.

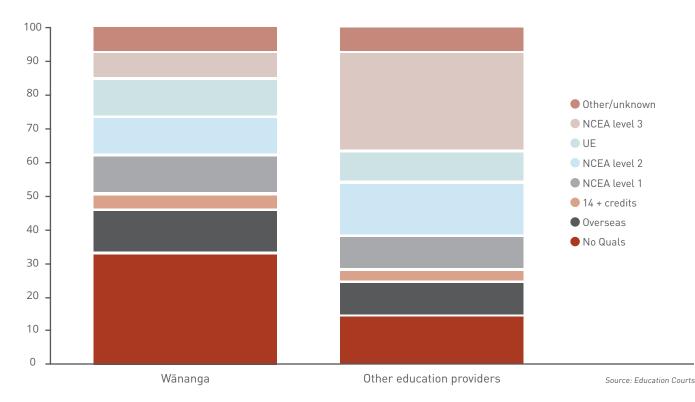


Figure 5.2 Tertiary students, highest qualification held prior to study, 2012

Prior to undertaking study, 51 percent of Wānanga students were employed or self-employed, while 20 percent were not in employment or were beneficiaries. Approximately 4 percent of students were at secondary school, while 13 percent were at another tertiary education provider. The prior qualifications

and activities of Wānanga students indicate that, in general, these students need more support to achieve higher-level qualifications. It also indicates the contribution the Wānanga sector is making to increasing Māori participation in tertiary education.

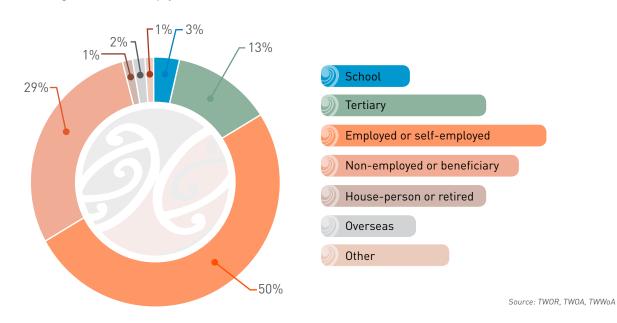


Figure 5.3 Wānanga students by prior activities, 2012

5.3 Wānanga student enrolments

The largest Wānanga in terms of student enrolments is Te Wānanga o Aotearoa. In 2012, approximately 32,370 of the 40,989 tertiary students enrolled at Wānanga studied here. Te Wānanga o Raukawa and Te Whare Wānanga o Awanuiārangi had student enrolments of approximately 1,897 and 6,722 students respectively.

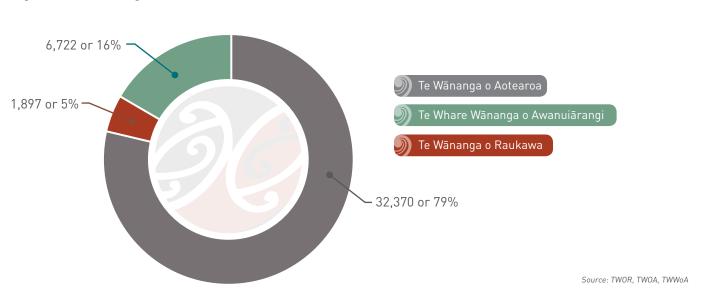
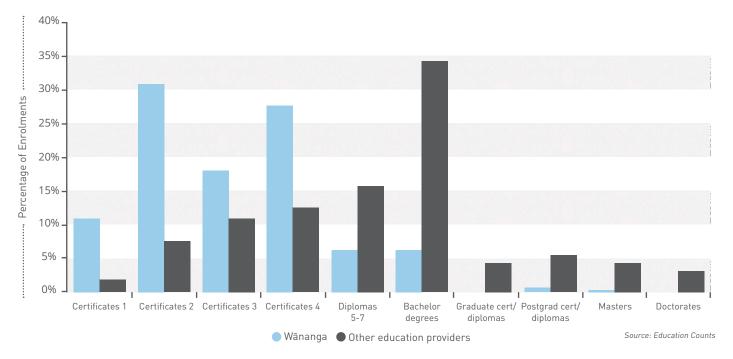


Figure 5.4 Wānanga student enrolments, 2012

The largest area of enrolments in tertiary education is in bachelor degrees. In 2012, approximately 144,745 tertiary students were enrolled in a bachelor degree. Across Level 1 to 4 certificates, approximately 153,380 students were enrolled in total, with equal numbers of students undertaking study at Level 3 and Level 4. An estimated 48,815 tertiary students were enrolled in postgraduate study. The distribution of student enrolments by qualification level is shown in the figure 5.5.





Points of note from this figure include:

• Approximately 31 percent of Wānanga students were studying for a Level 2 certificate in 2012 compared to 8 percent of other tertiary students.

• At the other end of the scale, 6 percent of Wānanga students were studying for a bachelor degree in 2012 compared to 35 percent of students at other tertiary providers.

Figure 5.5 illustrates that an estimated 87 percent of Wānanga students studied for a Level 1-4 certificate in 2012, while

13 percent studied for a Level 5 or higher qualification. However, it should be noted that these enrolment figures are heavily influenced by the number of students that are enrolled at Te Wānanga o Aotearoa.

Figure 5.6 therefore provides a better indication of the wide distribution of student enrolments at Wānanga. These enrolments also reflect the visions and core purposes of each Wānanga as reflected in the discussion in our section on The establishment of Wānanga.

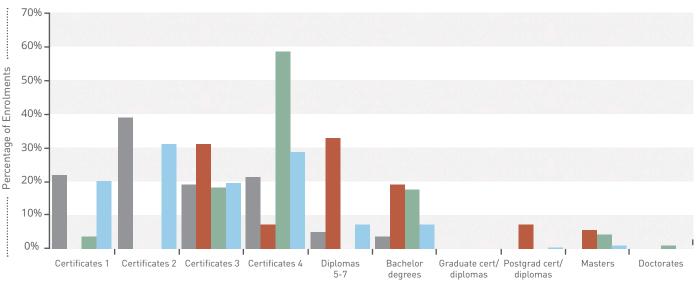


Figure 5.6 Wananga student enrolments by qualification level, 2012

• Approximately 39 percent of the student body at Te Wānanga o Aotearoa, were enrolled in Level 2 certificates in 2012. In contrast, there were no students enrolled at Te Wānanga o Raukawa studying at this level and just 0.3% of students at Te Whare Wānanga o Awanuiārangi. Overall, 93 percent of the student body at Te Wānanga o Aotearoa were enrolled in Level 1 to 4 certificates in 2012.

• The largest area of enrolment for students at Te Whare Wānanga o Awanuiārangi in 2012 was Level 4 certificates, with 58 percent of the student body studying at this level. However, a growing area of enrolments for this Wānanga is at the level of bachelor degree and postgraduate study as the Wānanga shifts its mix of provision to higher qualifications.

• Te Wānanga o Raukawa had 63 percent of its student body enrolled in bachelor degrees or higher level qualifications in 2012. With a large percent of students currently enrolled in bachelor degrees, the number of students undertaking postgraduate study in the future could increase.

5.4 Enrolment by field of study

In 2012, the most popular field of study for tertiary students was society and culture. Society and culture includes a variety of subjects such as law, economics, political science, languages, education, religious studies, librarianship and information management, sport and recreation, and studies on human welfare.

The most popular field of study for Māori students in 2012 was studies in society and culture (studies in human society), with 15,603 students. This was followed by enrolments in language and literature, business and management, general education programmes, and office studies.

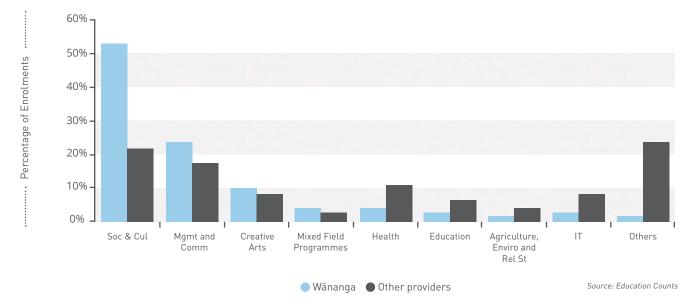
Table 5.2 Māori student enrolments, by field of study, 2012

Common fields of study*	Student enrolments	%
Studies in human society	15,603	18.0
Language and literature	12,016	13.9
Business and management	10,640	12.3
General education programmes	7,424	8.6
Office studies	7,386	8.5
Employment skills programmes	6,495	7.5
Other health	5,482	6.3
Public health	5,025	5.8
Teacher education	4,928	5.7
Communication and media studies	4,129	4.8
Other fields of study	7,511	8.6
Total	86,639	100.0
*Multiple reconnec		

*Multiple response

Source: Education Counts

An estimated 68,770 tertiary students were enrolled in qualifications within the broad field of study of society and culture in 2012. Of this number, 13,260 Wānanga students, or 54 percent, studied for a qualification within this field of study.





Management and commerce and health were also popular fields of study in 2012, as shown in Figure 5.8. Within management and commerce the largest area of enrolment was in business management, while in the health field of study, nursing was the most popular area of study.

For students enrolled at Wānanga, management and commerce was also a popular subject, with 5,740 or 23 percent of students studying in this area, followed by the creative arts with 2,560 or 10 percent of students. However, these enrolment figures are again heavily influenced by the

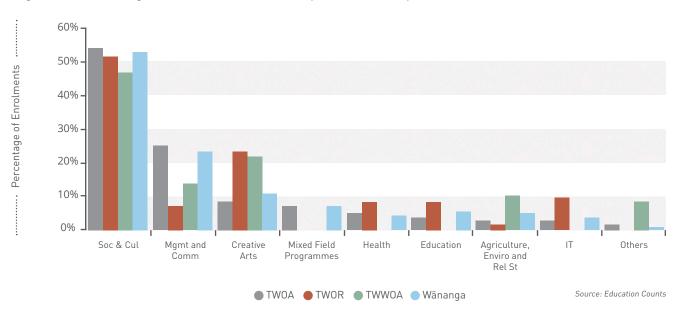


Figure 5.8 Wānanga student enrolments by field of study, 2012

number of students enrolled at Te Wānanga o Aotearoa. At Te Wānanga o Raukawa, 75 percent of students were enrolled in qualifications in society and culture and the creative arts. Other popular fields of study at this Wānanga included health and education, as shown in the figure above. In 2012, 54 percent of students at Te Wānanga o Aotearoa were enrolled in society and culture and 26 percent were enrolled in management and commerce. The creative arts was the third largest area of enrolments, with eight percent of students in 2012 studying for qualifications in this field.

The three most popular subject areas that students were enrolled in at Te Whare Wānanga o Awanuiārangi were also society and culture, management and commerce, and the creative arts. However, growing numbers of students are enrolling in other subject areas such as environmental studies, which attracted 10 percent of enrolments in 2012.

5.5 Enrolment in full or part-time study

Students can study full or part-time at a tertiary level. The TEC decides if a course is full or part-time by applying an Equivalent Full-Time Student (EFTs) value to each course.

The EFTS value is a measure of the amount of study or workload involved in undertaking a course.²⁷ A year of full-time study is usually between 0.8 and 1.2 EFTS.

The largest area of difference between Wānanga students and other tertiary education students is in part-time study.

An estimated 173,800 tertiary students, or 44 percent, studied full-time for a full year in 2012 while 64,700 or 17 percent studied full-time for part of the year.

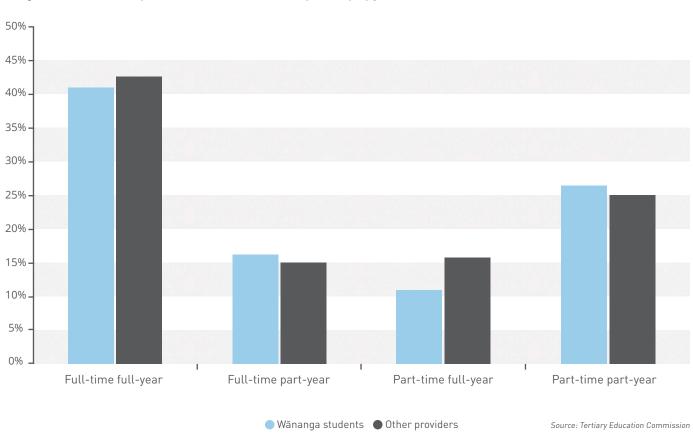
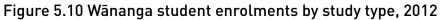


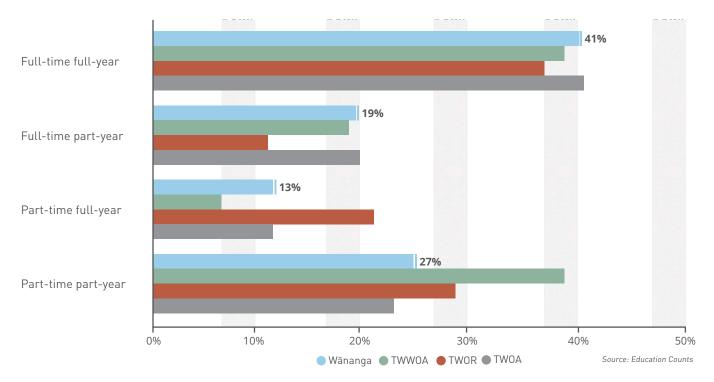
Figure 5.9 Tertiary student enrolments by study type, 2012

An estimated 16,100 Wānanga students, or 39 percent, studied full-time for a full year and 7,440 students or 18 percent, studied full-time for part of the year.

• Approximately 19 percent of tertiary students studied parttime for a full year in 2012, while 21 percent studied parttime for part of the year. • In contrast, 13 percent of Wānanga students studied parttime for a full-year and 27 percent studied part-time for part of the year.



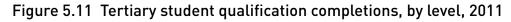


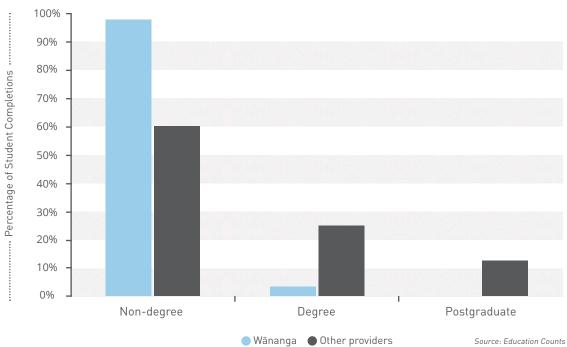


The most significant difference between the three Wānanga occurs when students studying part-time for a full year are compared. At Te Wānanga o Raukawa 25 percent of its student body studied part-time for a full year, while at Te Wānanga o Aotearoa 13 percent of its student body studied part-time for a full year. At Te Whare Wānanga o Awanuiārangi this proportion was lower again at 6 percent of the student body.

5.6 Qualification completions

The latest data on tertiary qualification completions is for the 2011 year. An estimated 19,200 Wānanga students completed a qualification in 2011, compared to 121,300 tertiary students from other providers.





These figures largely reflect the enrolment patterns of Wānanga students.

• 18,500 Wānanga students, or 96 percent, completed a certificate or diploma level qualification in 2011 while 700, or three percent, completed either a bachelor degree or a postgraduate qualification.

• In comparison an estimated 75,900 tertiary students from other providers, or 63 percent, completed a certificate or diploma level qualification in 2011 while 45,400, or 37 percent, completed either a bachelor degree or a postgraduate qualification in 2011

The largest area of difference between Wānanga students and other tertiary education students is in bachelor degree completions. Approximately 25 percent of tertiary students completed a bachelor degree qualification in 2011, but this number was lower for Wānanga students with just 3 percent or 660 students.

In addition, an estimated 15,200 tertiary students or 12 percent completed a postgraduate qualification, while 50 Wānanga students or less than one percent of the student body completed a postgraduate qualification in 2011.

Given the shift in the mix of provision, and the number of new undergraduate qualifications being offered within the Wānanga sector, it is not unusual that these figures are low. However, as new degrees are embedded into the Wānanga systems, and full cohorts pass through the three-year degree programme, it is anticipated that these figures will grow in the future.

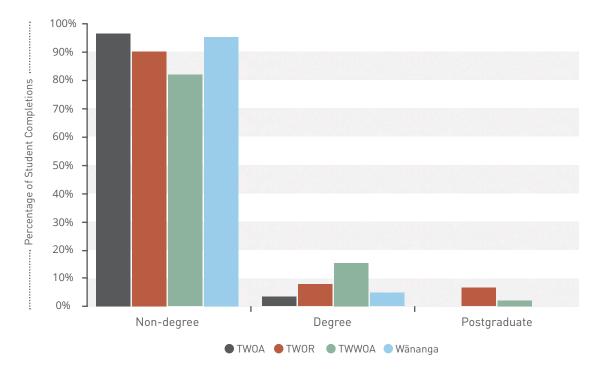


Figure 5.12 Wananga student qualification completions, by level, 2011

Figure 5.12 illustrates the spread of qualification completions across the sector. This figure reflects the enrolments shown in Figure 5.6 and the strategic direction of the individual Wānanga. For example, 63 percent of students at Te Wānanga o Raukawa and 22 percent of students at Te Whare Wānanga o Awanuiārangi were enrolled in bachelor degrees or higher level qualifications in 2012. Looking ahead, the completion of qualifications at this level of study will grow further.

5.7 Student demographics

The Wānanga student body is currently female dominated and has an older age profile. Just over half of the student body is Māori, and many students were working prior to their enrolment. The prior qualifications of this student body are also lower than the tertiary sector average.



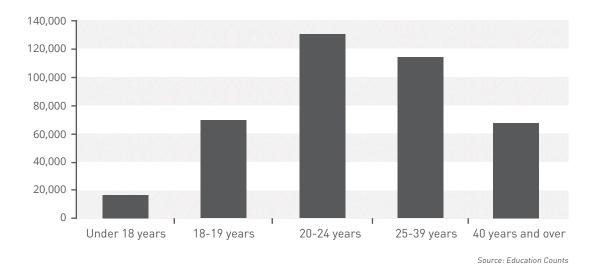


Figure 5.13 Age profile of tertiary students, excluding Wananga students, 2012

• In 2012, 52 percent of Wānanga students were in the 40 years and older age group, while 18 percent of all other tertiary students fall into this age group.

• Approximately 84 percent of students at Wānanga fall into the 25 to 39, and 40 years and older age groups, compared to 46 percent of students enrolled with other education providers.

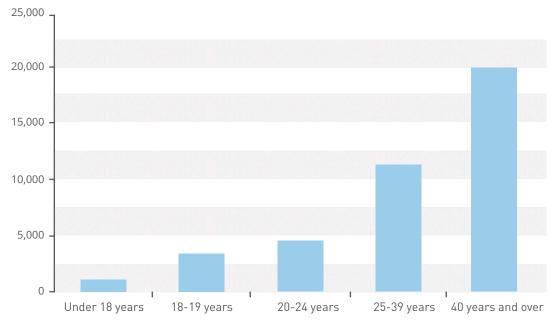


Figure 5.14 Age profile of Wānanga students, 2012

Source: Education Counts

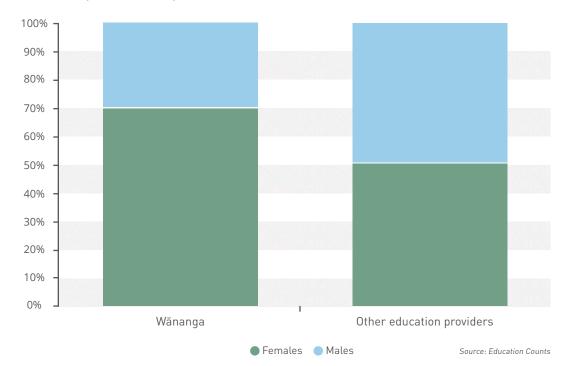


Figure 5.15 Tertiary students by sex, 2012

in 2012, while 45 percent were male. Within the Wānanga sector, 70 percent of students were female and 30 percent were male. The reason for this was due to 72 percent of

Approximately 55 percent of all tertiary students were female all enrolments at Te Wananga o Raukawa and 71 percent of all enrolments at Te Wānanga o Aotearoa being female students.

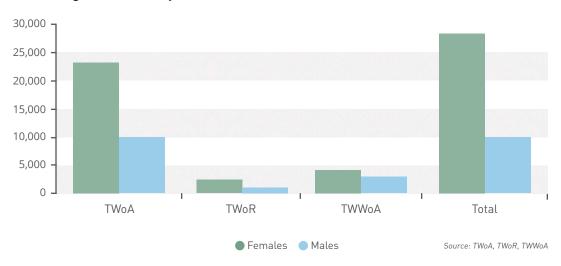


Figure 5.16 Wānanga students by sex, 2012

Just over half of the student body studying at Wānanga in identified as Māori were; Te Wānanga o Raukawa (94 2012 were Māori, as shown in Figure 5.17 (a). At each percent), Te Wānanga o Aotearoa (41 percent), and Te Wānanga the student body as shown in Figure 5.17 (b) Whare Wānanga o Awanuiārangi (91 percent).

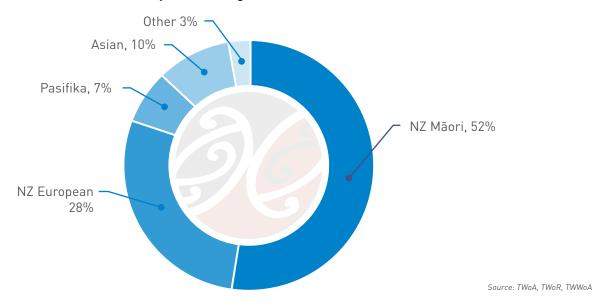
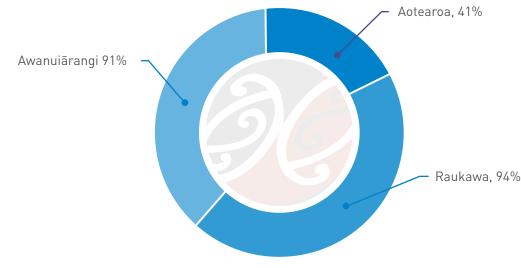


Figure 5.17 (a) Self-identified ethnicity of Wananga students, 2012

Figure 5.17 (b) Māori ethnicity of students at each Wananga, 2012



Source: TWoA, TWoR, TWWoA

5.8 Summary

In 2012, an estimated 422,450 students were enrolled in tertiary education in New Zealand. The largest area of enrolments is in bachelor degrees and the most popular field of study is within the broad field of society and culture. This field of study includes subjects such as law, economics, political science, languages, religious studies, librarianship and information management, sport and recreation, and studies on human welfare.

The largest area of difference between Wānanga students and other tertiary education students is in part-time study. In

addition, this difference varies between the individual Wānanga with 25 percent of students at Te Wānanga o Raukawa studying part-time for a full year while 6 percent of students at Te Whare Wānanga o Awanuiārangi study part-time for a full year.

Having established a picture of the current student body, the next section of our report looks to the future. Each of the Wānanga has a strategic plan and vision statement defining its medium and long-term goals and targets. These are closely aligned to their aspirations as the education arm of future iwi, hapū and whānau development.

6 The future and potential contribution

In an earlier section of our report, we considered the long-term economic gains of the establishment of each Wānanga, and their provision of a Wānanga learning environment. There we argued that this contribution is more broadly encapsulated in Wānanga being the education arm of future iwi, hapū and whānau development, and the impact of Wānanga courses and programmes on higher living standards.

In this section, we consider the future contribution the Wānanga sector could make to the national economy, and the need for this sector to evolve and grow to maintain its currency and increase its market share. This future contribution is based on the success of current government policy that is focused on improving the education outcomes of young Māori school leavers, growth in the Māori asset base and subsequently the Māori economy, and an increase in the proportion of the New Zealand population who are Māori.

6.1 The impact of policy levers

The establishment of each Wānanga was discussed earlier, along with the core role and government expectations regarding Wānanga as set out in the Education Act 1989. This section of our report also considered the initial establishment of each Wānanga and how and why they are closely tied to tribal groups, and have regard for teaching and research that maintains āhuatanga Māori and tikanga Māori. This section also explained the importance of providing education to increase human and social capital, as well as yield benefit to the country as an investor.

This report has discussed the similarities and differences between students at Te Wānanga o Raukawa, Te Wānanga o Aotearoa and Te Whare Wānanga o Awanuiārangi, and other parts of the tertiary education sector. It has considered student enrolments, and level and field of study. Student demographics, along with their prior qualifications and activities were also considered. Together, this information provides a broad picture of the Wānanga student body.

Looking ahead, however, the Wānanga sector will need to evolve and grow to meet the changing needs of potential students. These students may have higher prior qualifications, and different learning needs based on changing job opportunities and career paths. This assumption is based on changes in the labour market, technology improvements, and the successful outcome of public policy such as the Better Public Services education sector goals that support the current government's Business Growth Agenda.

These Better Public Services education sector goals focus on:

• An increase in the proportion of 18-year-olds with NCEA Level 2 or equivalent qualifications.

• An increase in the proportion of 25 to 34-year-olds with advanced trade qualifications, diplomas or degrees.

Currently, the Wānanga sector is well placed to support these goals based on their student body:

• 35 percent of Wānanga students had no formal secondary school qualification when they undertook tertiary study, while approximately 12 percent had NCEA Level 3, bursary or a scholarship.

• Approximately 87 percent of Wānanga students across the sector were enrolled in Level 1-4 certificates in 2012. There is therefore an opportunity to staircase these students into higher-level qualifications and further grow the proportion of students, particularly Māori students, who are undertaking degree, diploma and post-graduate study.

• Large numbers of Māori students enrol at Wānanga and this is a trend that could continue in the future due to population demographics and the physical location of Wānanga. It will also be assisted by online, distance learning and the expansion of course and programme offerings.

6.2 Population growth and location

Statistics New Zealand demographic projections indicate that Māori are well set to bolster, drive, and indeed lead the economic development of many regions over the coming decade. Further, this demographic opportunity places the Wānanga sector in a central position in regard to developing the labour capacity, capability and skills that will potentially underpin the economic development of these regions.

This central position may also be underpinned by growth in the Māori economy. In 2011, BERL estimated that the asset base of the Māori economy was \$36.9 billion (2010\$). In that research, we adopted a broad definition of the Māori economy and included in our calculations all entities and DRA

enterprises that self-identify as part of the Māori economy. This means we included collectively-owned assets, those assets and enterprises arising from historic Treaty of Waitangi settlements, Māori entrepreneurs active in individually-owned businesses and/or SMEs, as well as the contribution of Māori employees in terms of wages earned.

If we continue to adopt this broad definition in this research, as the Māori asset base and economy grows, and further settlements of historic Treaty of Waitangi claims occur, the demand for skills, education and training will also increase in areas where the Māori asset base is currently concentrated.

These areas include:

• The primary industry – agriculture, horticulture, forestry, fishing, and mining – and the manufacturing industries that process these products such as milk, meat, logs and fish.

• The service sectors – health care and community services, retail and wholesale trade, education, accommodation, cafes and restaurants.

• Building and construction, electricity, gas and water supply.

A focus on graduate outcomes that meet the needs of the Māori economy is already a focus of the Wānanga sector. This focus could broaden further, as Statistics New Zealand median population projections to 2021 indicate the potential for the Wānanga sector to play a pivotal role in the economic development of many regions.

Adopting the median assumptions of Statistics New Zealand ²⁸ indicates that the total number of Māori in New Zealand is expected to increase by about 93,000 people over the decade to 2021. Across broad age groups, this increase is relatively evenly spread – an increase of 29,000 Māori under the age of 15, a 21,000 increase in those aged between 15 and 39 years old, another 21,000 people in the 40 to 64 age group, and an increase of 22,000 Māori over the age of 65.

However, when we examine the regional dispersion of this population increase, the significance of these numbers grows. Statistics New Zealand demographic projections indicate that nearly 60 percent of the increase in the total New Zealand population is expected to occur in Tāmaki Makaurau. However, nearly 70 percent of the increase in the total number of Māori (or 65,000 of the total 93,000) will occur outside of this area, as illustrated in Figure 6.1.

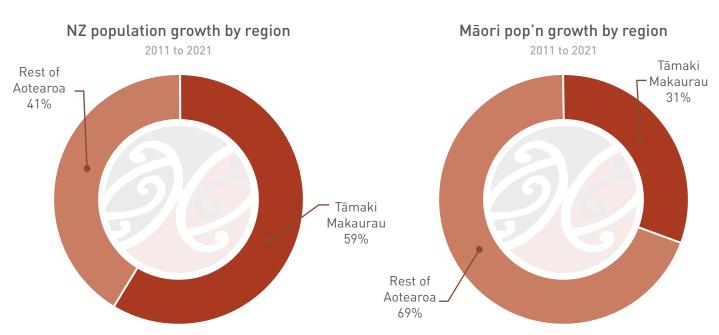


Figure 6.1 Location of population growth, 2011 to 2021

This picture becomes even starker when this population growth is broken down by age group in the regions outside of Tāmaki Makaurau. As depicted in Figure 6.2, growth in the number of 0-14 year olds is positive across all regions, in stark contrast to the absolute reduction in the number of non-Māori in the same age group. This age group may not be of immediate relevance to the these regions over the next decade. Consequently, the Wānanga sector. However, Māori-dominated population growth in these regions provides challenges and opportunities for the Wananga sector. Further, Maori will be a growing component of the demand for compulsory education in

current relationships each Wānanga has with institutions in the education sector in these regions should become even more important.

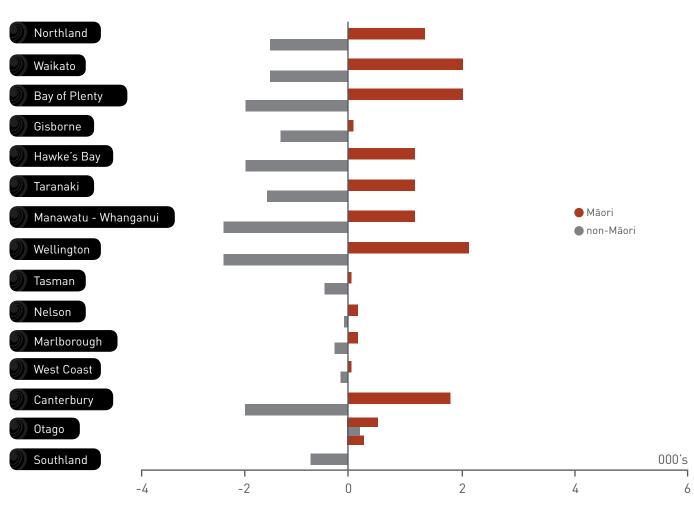


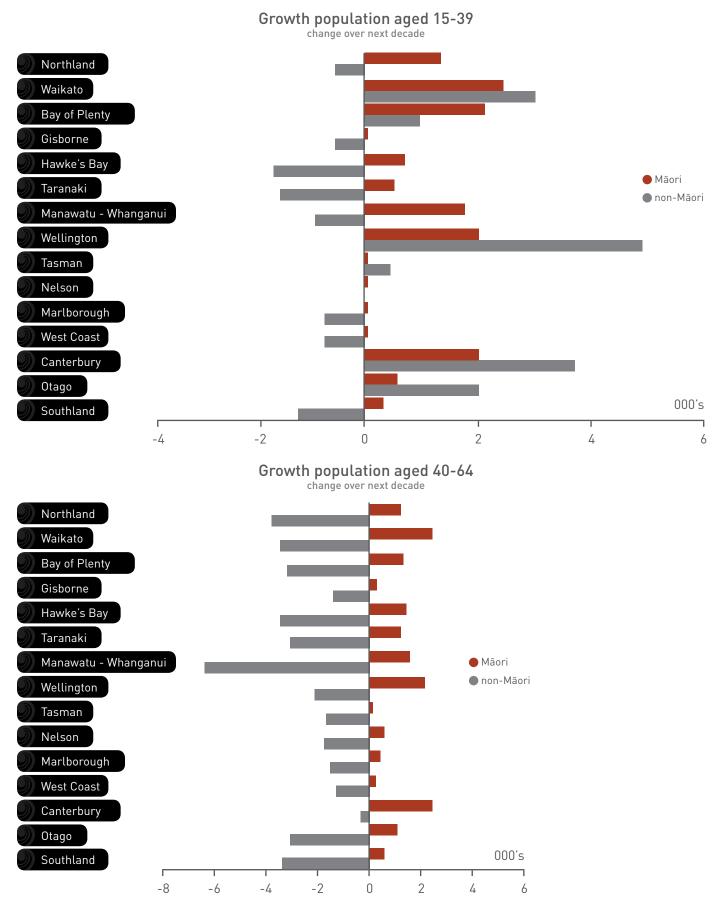
Figure 6.2 Population growth, ages 0-14, excluding the Auckland/Tāmaki Makaurau region, 2011-2021

Arguably, more pressing in the immediate term for the Wananga sector is the composition of population growth in the 15 to 39 and 40 to 64 age groups. Figure 6.3 illustrates the growth in these two age groups and the relative dominance of the Māori population.

The total number of Māori in the 15 to 39 age group will be well above that of non-Māori in many of the North Island

regions. The Māori population in this age group in the Northland, Gisborne, Hawke's Bay, Taranaki, and Manawatu-Whanganui regions is expected to grow while the number of non-Māori declines. Further, in the Bay of Plenty region the number of non-Māori in this age group is expected to grow, but there will be an even larger increase in the number of Māori.

Figure 6.3 Population growth, ages 15-65, excluding the Auckland region, 2011-2021



For the 40 to 64 age group, the number of non-Māori is set to decline in all regions outside of Auckland toward 2021, while the number of Māori is expected to increase. This demographic opportunity places the Wānanga sector in a central position in regard to developing the labour capacity, capability and skills that will potentially underpin the economic development of these regions.

These arguably conservative demographic projections from Statistics New Zealand send a message of challenge and opportunity for the Wānanga sector.

• The challenge is in the form of increased competition from other tertiary institutions in the regions. The demand for tertiary education provision in the regions will be difficult as the overall market size stalls in line with these population projections. Consequently, other tertiary providers may look to modify their existing services in order to appeal to those currently served by the Wānanga sector.

• The opportunity is in the form of an increased market for specialist Wānanga provision in the regions, as well as further opportunities to collaborate with other tertiary providers who recognise the specialist expertise of Wānanga.

Beyond these market considerations, the broader picture is one of opportunity for the Wānanga sector to be pivotal in shaping the development of regions around New Zealand. The demographics clearly indicate that many regions will be reliant on Māori for economic growth. This means Māori are well set to bolster, drive, and indeed lead the economic development of many regions over the coming decade.

7 Appendix A: Economic impact assessment

Our economic impact assessment of the three Wānanga uses a base year of 2012. This year was used as a full set of data was available on the operation and expenditure of each of the Wānanga, including data on the number of Wānanga staff.

This assessment of the economic impact of the three Wānanga is a conventional economic impact assessment. BERL use the reported 2012 operational and capital expenditure from each of the three Wānanga to measure the total economic impact of each of the Wānanga, in terms of gross output and value added (GDP). The total economic impact of each Wānanga in terms of employment is measured using the total FTE employment at each Wānanga. Total FTEs for each Wānanga include contractors, full-time and part-time teaching, administration and maintenance staff.

Contractors are included in these economic assessments of employment at the three Wānanga, where contractors are included in the staff numbers reported in each 2012 annual report. If contractor staff numbers are not included in the annual reports, the only economic impact of contractors that will be measured is in the gross output and value added, through the expenditure on these contractors.

The economic impact of volunteers at each of the Wānanga, on the other hand, is not included in this assessment. This is because volunteers are not paid for their efforts and therefore are not included in operational expenditure of each Wānanga. Also, as volunteers are not Wānanga employees, they are not included in the staff FTE numbers used for this economic impact assessment.

Total economic impact of Te Wānanga o Raukawa

In 2012 the total economic impact of Te Wānanga o Raukawa on the New Zealand economy was an estimated \$35 million in output, \$23 million in Gross Domestic Product and the employment of approximately 289 Full-Time Equivalents.

Table 7.1 Total economic impact of Te Wānanga o Raukawa

	Direct	Indirect	Induced	Total
Output (\$m)	15	9	11	35
GDP (2012\$m)	11	5	7	23
Employment	194	47	48	289

Source: BERL, TWOR, TWOA, TWWoA

Total economic impact of Te Wānanga o Aotearoa

In 2012 the total economic impact of Te Wānanga o Aotearoa on the New Zealand economy was an estimated \$357 million in output, \$241 million in Gross Domestic Product and the employment of approximately 2,084 Full-Time Equivalents.

Table 7.2 Total economic impact of Te Wānanga o Aotearoa

	Direct	Indirect	Induced	Total
Output (\$m)	156	93	108	357
GDP (2012\$m)	113	58	70	241
Employment	1,160	576	348	2,084

Source: BERL, TWOR, TWOA, TWWoA

Total economic impact of Te Whare Wānanga o Awanuiārangi

In 2012 the total economic impact of Te Whare Wānanga o Awanuiārangi on the New Zealand economy was an estimated \$90 million in output, \$57 million in Gross Domestic Product and the employment of approximately 517 Full-Time Equivalents.

Table 7.3 Total economic impact of Te Whare Wānanga o Awanuiārangi

	Direct	Indirect	Induced	Total
Output (\$m)	37	28	25	90
GDP (2012\$m)	23	18	16	57
Employment	209	220	88	517

Source: BERL, TWOR, TWOA, TWWoA

8 Appendix B: Methodology used Multiplier analysis

This multiplier analysis uses multipliers derived from interindustry input-output tables for New Zealand. Input-output tables have been derived from the national input-output tables and other data by Butcher Partners, Canterbury – a recognised source for regional input-output tables and multipliers.²⁹

Multipliers allowed us to identify the direct, indirect and induced effects in terms of output (Gross Domestic Product) and Full-Time Equivalent (FTE) employment.

Measures

Gross Output Multipliers

Gross output is the value of production, built up through the national accounts as a measure, in most industries, of gross sales or turnover. This is expressed in \$ million at constant prices.

Gross output is made up of the sum of:

- compensation of employees (i.e. salaries and wages)
- income from self-employment
- depreciation
- profits
- indirect taxes less subsidies
- intermediate purchases of goods (other than stock in trade)
- intermediate purchases of services.

Value Added (GDP) Multipliers

Value added multipliers measure the increase in output generated along the production chain, which, in aggregate, totals Gross Domestic Product (GDP). Value added is made up of the sum of:

- compensation of employees (i.e. salaries and wages)
- income from self-employment
- depreciation
- profits
- indirect taxes less subsidies.

Employment Impact Multipliers

Employment impact multipliers determine the number of FTE roles that are created for every \$1 million spent in an industry for one year. It provides a measure of total labour demand associated with Gross Output.

An FTE is the percentage of time an employee works represented as a decimal. A full-time position is 1.00; a part-time position is 0.50.

Direct, indirect and induced effects

The underlying logic of multiplier analysis is relatively straightforward. An initial expenditure (direct effect) in an industry creates flows of expenditures that are magnified, or "multiplied", as they flow on to the wider economy. This occurs in two ways:

• The industry purchases materials and services from supplier firms, who in turn make further purchases from their suppliers. This generates an indirect (upstream) effect.

• Persons employed in the direct development and in firms supplying services earn income (mostly from wages and salaries, but also from profits) which, after tax is deducted, is then spent on consumption. There is also an allowance for some savings. These are the induced (downstream) effects. Hence, for any amount spent in an area (direct effect), the actual output generated from that spend is greater once the flow-on activity generated (indirect and induced effects) is taken into account.

Leakages

Generally the more developed or self-sufficient an industry in a region is, the higher the multiplier effects. Conversely, the more reliant an industry is on supply inputs from outside the region, the lower the multipliers. These outside factors can be referred to as "leakages".

To put this another way, if a house was purchased in the Wellington region, and all the materials and labour were sourced in those regions, and all the materials and labour that went into making the housing materials were made in those regions and so forth, and then the labour spent their wages or salaries in the regions, again on goods or services produced solely in the Wellington region, then all the multiplier effects would be captured by the Wellington regions. Where inputs or outputs come from outside these regions, leakages are said to exist, and the multiplier effect is reduced.

Limitations of multiplier analysis Partial equilibrium analysis

Multiplier analysis is only a "partial equilibrium" analysis, assessing the direct and indirect effects of the development being considered, without analysing the effects of the resources used on the wider national and regional economy.

In particular, it assumes that the supply of capital, productive inputs and labour can expand to meet the additional demand called forth by the initial injection and the flow-on multiplier effects, without leading to resource constraints in other industries. These constraints would lead to price rises and resulting changes in overall patterns of production between industries.

To assess inter-industry impacts in full would require economic modelling within a "general equilibrium" framework. Applying such models becomes more relevant where the particular development is considered significant within the overall economy.

Additionality

Related to partial equilibrium, using multipliers for economic impact assessments assumes that the event is something that would not have been undertaken anyway and that it will not displace existing activity. That is, the event is additional to existing activity.

If it does either of the above, then the economic impact is less than that determined by the multiplier and it would be necessary to subtract both the activity that would have occurred anyway and the displacement effect.

Impact

Again related to "partial equilibrium", multiplier analysis assumes that an event will not have an impact on relative prices. However, in a dynamic environment, it can be assumed that a large event would have an impact on demand and supply and hence prices. Hence, the larger the event and the more concentrated it is in a single industry or region, the more likely it is that the multipliers would give an inaccurate analysis of impacts. For example, if multiplier analysis was used to determine the effect of residential building construction nationally it would likely be inaccurate as residential building construction accounts for over 6 percent of GDP.

Aggregation

Industries outlined in input-output tables are aggregates of smaller sub-industries. Each sub- industry has unique inputs and outputs. The higher the level of aggregation the less accurate these inputs and outputs become. Thus, if determining the multiplier effect of a very specific event using highly aggregated data, there will be a lower level of accuracy. Similarly, if an event encompasses a range of industries, and multipliers from a single industry are applied, the accuracy levels will diminish.

Regions and boundaries

The smaller or less defined a region and its boundaries, the less accurate the multiplier analysis will be. Similarly, the easier it is to move across boundaries, the less accurate the analysis will be. For example, at the national level, the multipliers will be very accurate as it is easy to determine the inputs and outputs crossing through the New Zealand borders.



Similarly, it would also be more accurate to determine a North Island/South Island split. As smaller regions without obvious geographic boundaries are selected, a higher level of assumptions needs to be made and the multipliers become less accurate. For example, an individual could work in the Auckland region but live in the Waikato region and spend a large proportion of his/her recreation money in the Bay of Plenty region.

For any regional analysis the level of accuracy will have to be accepted. As a rule of thumb, the larger and more defined the region, the more accurate the analysis will be.



