Career Futures for Pacific Peoples

A report on future labour market opportunities and education pathways for Pacific peoples

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Executive Summary

The need to increase Pacific participation in the skilled workforce

The Pacific population living in New Zealand is young and growing. By 2025 Pacific peoples will make up eight percent of the New Zealand population compared with six percent today. Currently Pacific peoples are over-represented in occupations that are projected to have low future growth (eg, trades workers) and under-represented in occupations with high growth (professionals). Where Pacific peoples are in industry groups with high future growth, they are more likely to be in the low-skilled, low-paid occupations within them. The continuing over-representation of Pacific peoples in low-skilled areas is neither equitable for Pacific communities nor good for the social and economic wellbeing of New Zealand as a whole.

Future demand

The key area of future demand is advanced trade, technical and professional qualifications, especially in engineering and related technologies, architecture and building. This is particularly marked for civil engineering and across industrial, manufacturing and mechanical engineering and technology, as well as for engineering technicians. Specialised managers and business professionals are two occupational groups with high future demand where Pacific peoples are not currently well represented (although they are now studying in these areas at higher rates).

The services industry sector has the best future growth prospects and the area with the best returns is business services, where Pacific peoples are under-represented. The occupational group with the highest returns and highest forecast growth is professionals. Again, Pacific peoples are under-represented in this occupational group.

Education and training

To enter an advanced trade, technical or professional occupation, degrees, and often post-graduate-level study is required. Effective schooling and sound NCEA subject choices are critical prerequisites for Pacific students to enter and succeed in higher-level tertiary education. With only 22.8 percent of Pacific school leavers able to enter university (*compared with 48.3 percent of Pākehā students*), the biggest challenge to success for Pacific students lies in the school sector.

On the whole, any degree is a good qualification to have and completion of a degree before the age of 25 has the highest benefits. A degree in an area of future demand, such as engineering or many of the professions is even better. Diplomas (level 4 and above) are useful qualifications too, especially in technical and professional areas, and especially for men. However, Pacific peoples do not tend to choose subject areas with high future demand and their retention and completion rate at diploma and degree level is lower than that of other groups.

Modern Apprenticeships are a useful pathway to high-demand trade qualifications, but Pacific participation and completion is lower than for other groups. It is not clear why this is. Industry training pathways generally lead to high-demand diplomas, but they only have clear income benefits for male employees. Few industry pathways lead to degree-level qualifications.

Improving future employment prospects for Pacific

There are two aspects to improving future employment prospects for Pacific peoples:

- shifting qualifications and employment choices to higher-demand industry sectors
- shifting from low- to high-skilled jobs within high-growth industry sectors.

To achieve this, Pacific peoples require:

- effective schooling and subject choices that open up future education and career pathways
- understanding of key areas of future employment demand, and
- retention and progression in tertiary education, including progression to higher-level study through industry training pathways.

Possible actions to support the required shifts in education and employment outcomes for Pacific peoples include improved education system performance for Pacific school students, better information to inform students' subject, qualifications and future career choices, and support for retention and progression in tertiary education, including better pathways between low-level and higher-level tertiary education.

Introduction

The Pacific population living in New Zealand is young and growing[1]. By 2025 Pacific peoples will make up eight percent of the New Zealand population compared with six percent today.

Two-thirds of the Pacific peoples in New Zealand live in Auckland, and in 2006 they made up 13.7 percent of Auckland's regional population. At least one in four babies born now in Auckland is Pacific. These babies will grow up to represent a quarter of new job entrants in Auckland in fifteen to twenty years and by 2050 will be one of the largest consumer and voting groups in Auckland[2].

The wellbeing of Pacific peoples and their families, as well as the New Zealand economy, will depend on them gaining employment in areas that will meet their aspirations and the national and international labour market requirements of the future.

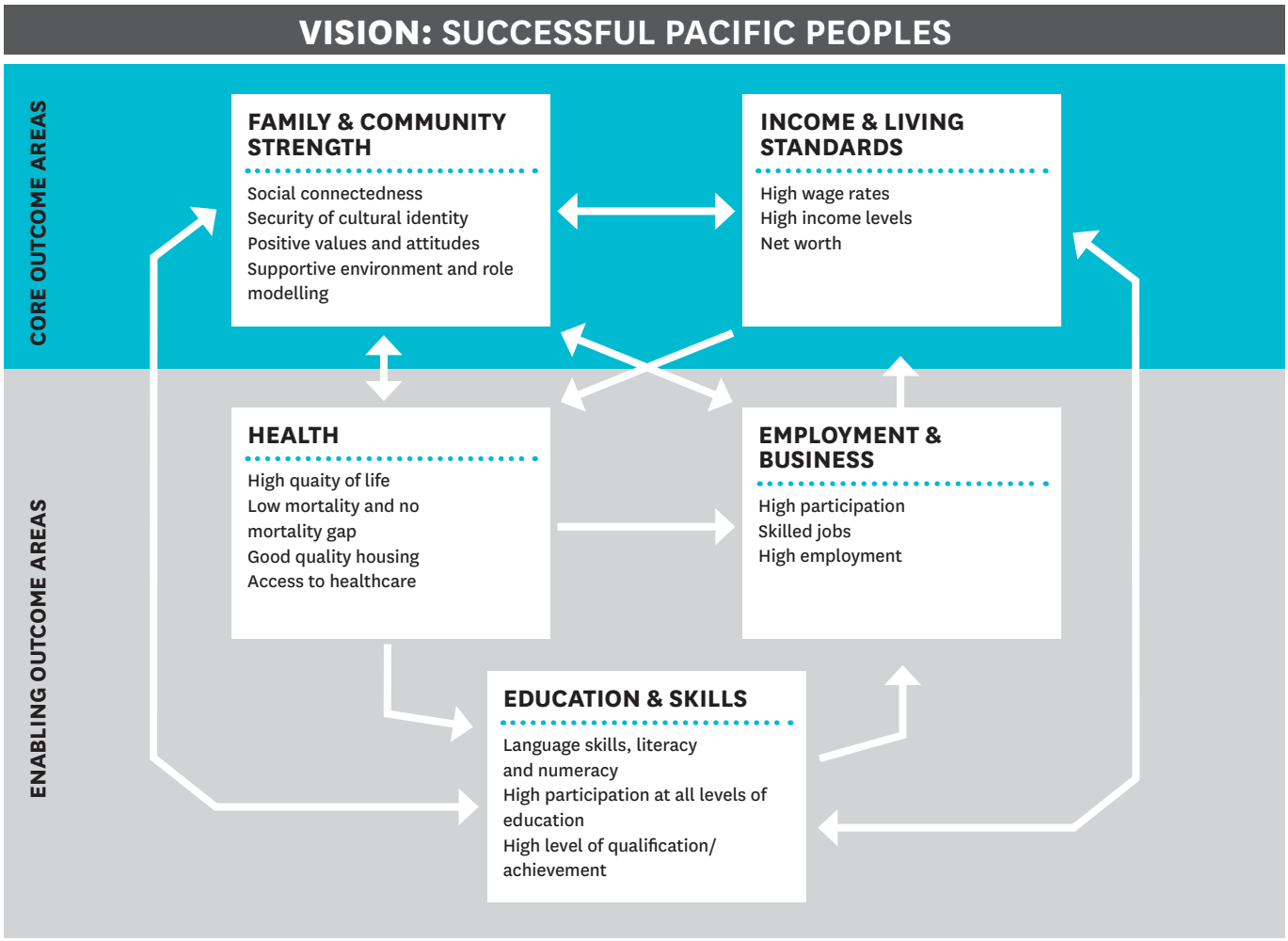
Table 1: Composition of the New Zealand population 15 years and over by ethnic group

Ethnic group	*2000*	*2005*	*2010*	*2015*	*2020*	*2025*
Pākehā	81%	79%	76%	74%	73%	71%
Māori	12%	12%	13%	13%	13%	14%
Pasifika	5%	6%	6%	7%	7%	8%
Asian	6%	9%	11%	12%	14%	15%
Total	100%	100%	100%	100%	100%	100%

Source: http://www.educationcounts.govt.nz/publications/tertiary_education/46677

Currently, Pacific peoples tend to be heavily represented in low-skilled, low-paid work. This can restrict their opportunities for realising their aspirations and potential. There is also a clear connection between low pay and poorer education, health and other social outcomes[3]. These impacts are highlighted in the Pacific Outcomes Framework below (Figure 1).

1 *Callister & Didham, 2008*
2 *Statistics New Zealand – 2006 Census data http://www2.stats.govt.nz/domino/external/web/nzstories.nsf/092edeb76ed5aa6bcc256afe0081d84e/9407bfc87b838c6acc256b2500739e78?OpenDocument*
3 *Foley, 2005*



To ensure that Pacific peoples and communities can make the most of the opportunities available in the employment sector and wider society, both now and in the future, it is important that they pursue education and career opportunities that lead to high-skilled and high-paid work in areas of future demand.

If by 2021 Pacific peoples' wage incomes are similar to the incomes of non-Pacific people, the benefits to the New Zealand economy would be in the order of $4 to $5 billion in 2001 price terms[4].

This report is intended to strengthen the knowledge available about the future employment opportunities and education pathways available for Pacific peoples that will meet New Zealand and international labour market needs of the future.

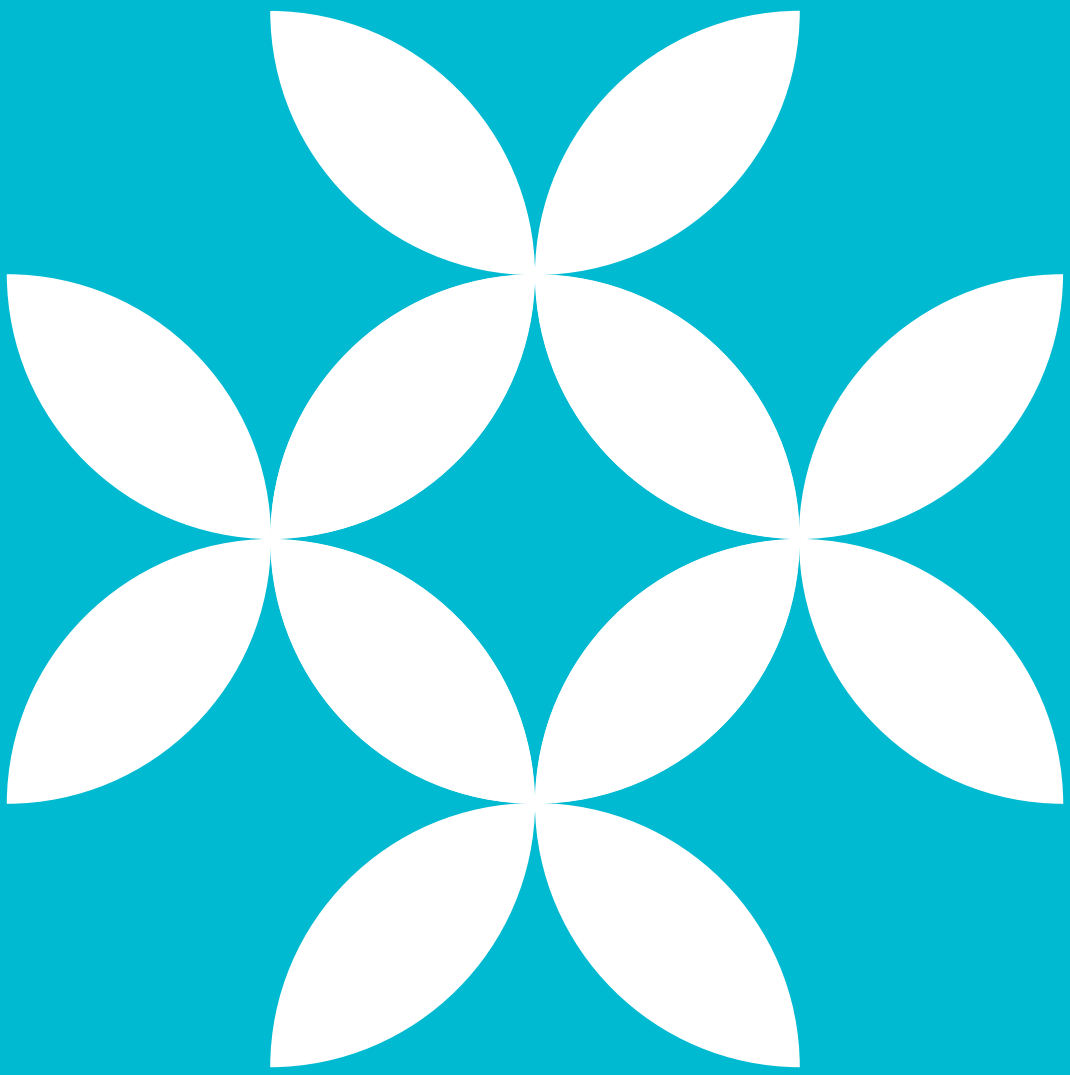
The report is set out in three main sections:

- Section 1: Employment trends
- Section 2: Education pathways
- Section 3: Conclusion and policy options.

Methodology and data

This report is based on a 2009 report by the Department of Labour using forecasts from its Work Directions Branch and data from the 2006 census, provided by Statistics New Zealand. This report also draws on research reports and statistics from the Ministry of Education's Education Counts website at www.educationcounts.govt.nz.

4 Economic Participation Report, 2006



Section 1: Employment trends

Areas of future demand

Future employment demand is calculated on the basis of the additional job openings in an industry plus the replacement demand from retirement, migration, job mobility or turnover. Future growth is measured both in terms of the growth in overall numbers of people and the proportion of employment growth in relation to the current numbers employed in the particular occupational group.

Business and Economic Research Ltd (BERL) has predicted that future employment growth will be weak in construction, agriculture, forestry and fishing, and communication services. In turn, export-related industries such as tourism, transport, wholesale trade and elements of manufacturing are expected to experience moderate employment growth. Within the manufacturing sector, BERL projects a contrast in employment growth between the relatively fast-growing machinery and equipment sector and the slower-growing primary product processing (food and wood) industries[5].

Skill levels

The highest level of forecast growth demand by 2013 is in the highest-skilled areas of employment. The skilled occupational group is predicted to have low growth by 2013 and the semi-skilled occupational group is projected to have almost no growth. The elementary skills group, including operators and labourers, is forecast to grow by around four percent per annum by 2013.

Table 2: Future demand growth in the occupations grouped by skill level

DoL estimates & forecasts			
Occupations	***Expansion demand 2008-13 (average growth)***	***Replacement demand 2013 (estimated at)***	***Total demand 2013***
Highly skilled	3.6%	2.1%	5.7%
Skilled	-0.8%	2.0%	1.2%
Semi-skilled	-2.0%	2.8%	0.8%
Elementary	2.1%	2.3%	4.4%
Total – for all occupations	**0.6%**	**2.4%**	**3.0%**

Source: DOL Presentation to the ITF Research Forum, April 2009.

Within the highest-skilled occupations, administrators, managers and professionals will see significant levels of growth by 2018. The skilled occupational groups of technicians and associate professionals are predicted to have a low level of growth, with some areas such as trades having no growth at all. Within the semi-skilled occupational group, clerks are forecast to have virtually no growth demand in 2018. The two other semi-skilled occupational groups, service and sales workers and agriculture and fishery workers, are both forecast to grow by only about one percent over that time. The elementary skills group, including operators and labourers, is forecast to grow by only 0.9 percent by 2018[6].

5 http://www.berl.co.nz/873a1.page
6 Source: Department of Labour estimates and forecasts

Table 3: 2018 demand growth by skill group

Skill group	2008 Employed	2008 Employed % share	2008–18 Demand growth	2008–18 Demand Growth as % of 2008 employed
Highly skilled - administrators, managers & professionals	649,978	30%	19,788	3.0%
Skilled - technicians & associate professionals	259,699	12%	6,410	2.5%
Skilled - trades workers	221,505	10%	-66	0.0%
Semi-skilled - clerks, agricultural workers, others	746,093	35%	5,507	0.7%
Elementary skills - operators, building workers & labourers	275,575	13%	2,526	0.9%
Total	**2,152,850**	**100%**	**34,165**	**1.6%**

Source: Department of Labour (DoL) employment estimates and forecasts, June 2009

Pacific peoples

Currently, Pacific peoples are significantly over-represented in the lowest-skilled occupational groups and in skill groups with low future demand. For example, Pacific men have a very high representation in the semi-skilled occupational group consisting of workers in clerical positions in offices, in retail services and in agriculture (8.2 percent compared with 4.6 percent over all industries). Pacific women have a high representation in the trades occupational group, which will have one of the lowest growth rates of the semi-skilled occupational groups. Conversely Pacific peoples are under-represented in the more highly skilled occupational groups.

Occupational groups

According to Department of Labour projections, the top ten occupational groups in terms of growth in employment demand by 2018 will be:

- specialised managers
- housekeeping and restaurant services workers
- business professionals
- finance and sales associate professionals
- personal care workers
- salespersons and demonstrators
- library, mail and related clerks
- computing professionals
- nursing and midwifery professionals
- writers, artists, entertainment and sports associate professionals.

Specialist managers is the largest group in terms of the number of people employed (over 10 percent), and also has a relatively high employment demand growth (over seven percent) during the ten-year period to 2018. The housekeeping and restaurant services workers group has a high 2018 forecast employment demand growth (about six percent over the ten years) as a result of the very high turnover or replacement rate. Salespersons and demonstrators also have a high replacement demand, which offsets a forecast slight contraction in the size of this occupation within the wider labour market.

Business professionals, personal care workers and the group of writers, artists, entertainment and sports associate professionals, all have very high forecast growth demand in 2018 as a percentage of the number employed in 2008. This is mainly due to expansion in employment but also replacement needs.

Pacific peoples

The table below sets out Pacific peoples' current employment in relation to the top ten occupational groups.

Table 4: Pacific peoples' representation in top ten occupations

Occupational Group	*2018 Employment demand as % 2008 employed*	*Current Pacific total*	*Pacific female*	*Pacific male*
Specialised managers	7.2%	2.4%	2.7%	2.1%
Housekeeping and restaurant services workers	5.9%	5.8%	6.3%	5.1%
Business professionals	8.7%	2.3%	2.6%	1.9%
Finance and sales associate professionals	5.1%	4.9%	6.4%	3.3%
Personal care workers	9.0%	7.5%	7.5%	8.2%
Salespersons and demonstrators	3.4%	3.3%	3.2%	3.5%
Library, mail and related clerks	4.4%	4.2%	4.0%	5.2%
Computing professionals	10.4%	2.2%	3.3%	1.8%
Nursing and midwifery professionals	8.1%	2.8%	2.7%	3.6%
Writers, artists, entertainment and sports associate professionals	8.4%	2.8%	2.1%	3.6%

Source: Statistics New Zealand Census of Populations and Dwellings, 2006 and Department of Labour (DoL) employment estimates and forecasts, June 2009

The occupations in which Pacific peoples are most highly represented are all occupations with relatively low employment demand growth. Most of them are doing little more than staying stable, which means that the replacement demand offsets the reduction in the overall numbers employed in these occupations.

Of the ten occupations with the highest future demand growth, there are only three in which Pacific peoples are represented more highly than their overall average of 4.5 percent. These are housekeeping and restaurant service workers, finance, sales and associate professionals, and personal care workers. Future high demand is important in terms of secure employment opportunities and usually higher pay. However, this is not always the case. The high employment demand for housekeeping and restaurant service workers in particular and also to some extent for personal care workers is driven by a very high turnover or replacement rate. Although there will be high future growth in these two areas, they are relatively low skilled, insecure and lower paid. Appendix 1 has more information about occupational groups.

Industries or sectors

There are five main industries or sectors:

- primary (ie, farming, fishing , forestry & mining)
- manufacturing
- construction
- wholesale and retail trade
- services (public and private).

Over half of all people in the labour force are employed in the services sector. This sector is also expected to have the highest rate of forecast growth in demand in the period to 2018. The primary sector (which makes up only eight percent of the total employed) is also expected to realise a modest level of forecast growth in demand (about 1.7 percent on average). The remaining sectors are forecast to experience only very little demand growth. The total forecast growth in demand across the manufacturing, construction and wholesale and retail trade sectors has only a four percent share of the total growth in demand while these sectors make up 38 percent of the workforce in 2008. Appendix 1 has further information about growth demand by industry group.

Within the services sector, business services is the largest industry group (over 250,000 employed) and also has a relatively high percentage rate (about four percent) of forecast demand growth. The highest forecast rate of growth in demand within the services sector is in the health-care and social-assistance industry group (about five percent – see Appendix 1). While only making up about eight percent of the workforce in 2008, this group has a 23 percent share of the overall forecast growth in demand. This is consistent with the ageing of the New Zealand population which will be rapidly increasing over the next ten years. The largest occupation within this industry group is personal-care workers. The share of the industry taken by this group is forecast to grow, and the occupation has a very high rate of forecast growth in demand. It is also an industry in which Pacific peoples are very highly represented but most frequently in low-skilled, low-paid and insecure positions.

The education sector has a slight forecast contraction over the 2008–18 period due to demographic shifts. Much of the low growth in this service sector is driven by the small retraction in the total number of teachers across the education sector expected by 2018. Pacific peoples are slightly under-represented in the primary and early-childhood teaching professional occupation, and significantly under-represented in the secondary and tertiary teaching professional occupation.

While teaching overall is not forecast to be a high growth area, there is likely to be high demand for Pacific teachers and principals due to the increasing proportion of Pacific children in the New Zealand population, particularly in Auckland. The presence of more Pacific teachers and principals may also help to raise the performance of schools for Pacific students.

Pacific peoples

Pacific peoples are under-represented in the primary sector (agriculture, forestry, fishing and mining) which is projected to experience modest (less than two percent) growth. The industries in which Pacific peoples are over-represented such as manufacturing, construction and trade sectors, will experience only moderate to low growth (less than 0.5 percent). While Pacific peoples are well represented in the overall services industry where higher-demand growth (between three and four percent) is anticipated, they are under-represented in the highest-demand parts of that industry, such as the business services sector and the most skilled within this sector which are the business professionals. Table 5 below sets out Pacific peoples' current representation in the five industry groups with highest future growth in demand.

Table 5: Pacific peoples' representation in top five industries of employment growth

Industry group	*Pacific total share*	*Pacific female share*	*Pacific male share*
Primary: agriculture, forestry and fishing	1.5%	1.4%	1.6%
Services: business services	3.6%	4.1%	3.2%
Services: health care and social assistance	4.4%	4.4%	4.5%
Services: arts and recreation services	3.7%	3.6%	3.8%
Other services	3.7%	3.7%	3.8%

Source: Statistics New Zealand Census of Populations and Dwellings, 2006 and Department of Labour (DoL) employment estimates and forecasts, June 2009

Regional patterns

The occupational group with the largest forecast growth in demand (professionals) is concentrated in Wellington (about 23 percent), and to a lesser extent in Auckland (about 19 percent) and makes up the highly skilled occupational group. Auckland and Wellington also have a slightly greater representation of two other groups with significant forecast demand growth – legislators, administrators and managers who are also categorised as highly skilled, and technicians and associate professionals classified as skilled.

The group with the largest **amount** of forecast growth in demand from 2008 to 18 – business services – has a high representation (between 15 and 16 percent) in Auckland and Wellington. The occupations with the highest **share** of growth – health care and social assistance, arts and recreational services, and other services, are represented across New Zealand.

Pacific peoples

Of all Pacific peoples in employment, 65 percent live in the Auckland region. A further 25 percent live in the Wellington region. Only five percent of Pacific peoples who are employed live in the Canterbury region compared with 14 percent of the total population. There is also a significantly lower representation of Pacific peoples in the regions that do not contain a major city.

As a result, the forecast demand for those occupations and industries which have a major presence in Auckland, and to a lesser extent in Wellington, are particularly important for Pacific peoples.

Demand for qualifications[7]

There are medium to long-term skill shortages in many areas of advanced trade, technical and professional employment. While there tends to be an oversupply of people with certificate-level qualifications in these areas, there tends to be an undersupply at degree level and above.

Table 6 below summarises the findings for different fields of study. It shows whether the trend in the number of graduates decreased, remained the same or increased, and then shows if graduate numbers entering the workforce were less than, equal to or greater than the net number of vacancies in related occupations. The shaded boxes indicate the fields and levels where the number of graduates has fallen short of the estimated demand resulting from occupational growth and retirements.

7 This section has been drawn from Earle, D. (2009). Advanced trade, technical and professional qualifications – trends in supply. Tertiary Sector Performance Analysis and Reporting team. Wellington: Ministry of Education. Downloaded from http://www.educationcounts.govt.nz/publications/tertiary_education/47719

Table 6: Summary of trends and supply and demand across fields of study (2002 – 2006)

		Level 4 certificate	*Diploma*	*Bachelors/honours*	*Masters/doctorate*
Information technology	Graduates		↘	↘	→
	Supply-demand		↑↑	↑	↓
Engineering and related technologies	Graduates	↗↗	→	→	→
	Supply-demand	↓	↓↓	↓	↓
Architecture	Graduates		→	→	→
	Supply-demand		↓	↓	↓↓
Building	Graduates	↗	→	→	
	Supply-demand	↓	↓↓	↔	
Medical studies	Graduates			→	→
	Supply-demand			↔	↓↓
Nursing	Graduates	→	→	→	
	Supply-demand	↓	↔	↔	
Other health	Graduates	↗	→	↗	
	Supply-demand	↑↑	↑	↑	
Accountancy	Graduates			→	
	Supply-demand			↓	
Finance and sales	Graduates		→	→	
	Supply-demand		↔	↑↑	
Human and welfare studies and services	Graduates		↗	↗	
	Supply-demand		↑	↑	
Behavioural science	Graduates			→	
	Supply-demand			↑	
Law	Graduates			→	
	Supply-demand			↑	
Food and hospitality	Graduates			↗	
	Supply-demand			↑	

The areas in which there is consistent evidence of a shortage of graduates are engineering and related technologies, and architecture and building. A closer examination of the engineering and technology area revealed particular shortages in civil engineering and across industrial, manufacturing and mechanical engineering and technology.

There is consistent evidence of an ongoing shortage of graduates at bachelor's level and above, with a particular unmet demand at diploma level (engineering technicians). The downturn in construction and manufacturing will reduce demand for these qualifications in the short term, but demand is likely to continue to increase in the medium to long term.

Table 7: Supply and demand estimates for engineering and related technologies (2002 – 2006)[8]

	Supply	Demand			Supply-Demand	
	No. of graduates	Occupational growth	Retirement	Total	No.	% of employed
Level 4 certificate	15,170	5,210	11,300	16,510	-1,330	-2
Diploma	2,310	2,160	3,980	6,150	-3,840	-11
Bachelors/honours	4,530	3,500	1,610	5,105	-570	-3
Masters/doctorate	1,000	780	390	1,160	-160	-3

See appendix 2 for interpretation

In information technology, there has been an oversupply of graduates at diploma level, adequate supply at bachelor's level and a shortage at postgraduate level.

Table 8: Supply and demand estimates for information technology (2002 – 2006)[9]

	Supply	Demand			Supply-Demand	
	No. of graduates	Occupational growth	Retirement	Total	No.	% of employed
Diploma	4,910	-600	-170	-770	5,680	82
Bachelors/honours	5,940	3,510	-180	3,330	2,610	19
Masters/doctorate	420	470	30	500	-80	-4

See appendix 2 for interpretation

8 The occupational reference group for certificates is electricians, metal and machinery trades workers, precision trades workers, other craft and related trades workers (except food and related products processing) and industrial plant operators. The occupational reference group for diplomas is engineering technicians. The occupational reference group for bachelors, masters and doctorates is engineering professionals.

9 The occupational reference group for diplomas is computer equipment controllers. The occupational reference group for bachelors, masters and doctorates is computing professionals.

There is also evidence of a shortage of graduates with qualifications at bachelor's level and above in accountancy.

From 2002 to 2006, around 2,000 people a year graduated with bachelor's degrees in the area of finance and sales and about 250 to 300 with diplomas. The model suggests that there could be a shortage of people with diplomas in finance and sales. However, this is more than made up for by a strong supply of people with bachelor's degrees.

Increasing the number of Pacific peoples graduating with advanced trade, technical and professional qualifications in areas of growth will ensure strong employment opportunities with a high level of associated benefits. A particular area of unmet demand is diplomas in engineering (technicians).

Key messages

Currently Pacific peoples are over-represented in occupations that are projected to have low future growth (eg, trades workers) and under-represented in occupations with high growth (professionals).

Where they are in occupational areas with high future growth, such as the service sector, they tend to be over-represented in the low-skilled, low-paid parts of those sectors. While these areas are predicted to grow, the over-representation of Pacific peoples in low-skilled areas is neither equitable for Pacific communities nor good for the social wellbeing of New Zealand as a whole.

On the positive side, Pacific peoples are located primarily in Auckland and Wellington, both of which have industries with high projected growth.

Demand is strongest for advanced trade, technical and professional qualifications. Engineering and related technologies, and architecture and building have consistent unmet demand for qualifications at diploma level and above. This is particularly marked for civil engineering and across industrial, manufacturing and mechanical engineering and technology, as well as for engineering technicians. Specialised managers and business professionals are two occupational groups with high future demand where Pacific peoples are not currently well represented (although they are now studying in these areas at higher rates).

The industry sector with the best future prospects in terms of growth is the services sector. Within that sector, the area with the best returns is likely to be business services and management where Pacific peoples are under-represented, rather than care provision where Pacific peoples are highly represented.

The occupational group with the highest returns and highest forecast growth is professionals. Again, Pacific peoples are under-represented in this occupational group.

While teaching is not forecast to be a high growth area, there is likely to be high demand for Pacific teachers and principals due to the increasing proportion of Pacific children in the New Zealand population, particularly in Auckland.

There are two aspects to improving future employment prospects for Pacific peoples:

- shifting qualifications and employment choices to higher-demand industry sectors
- shifting from low to high-skilled jobs within high-growth industry sectors.

Key to both of these is good choices and success within the education system.

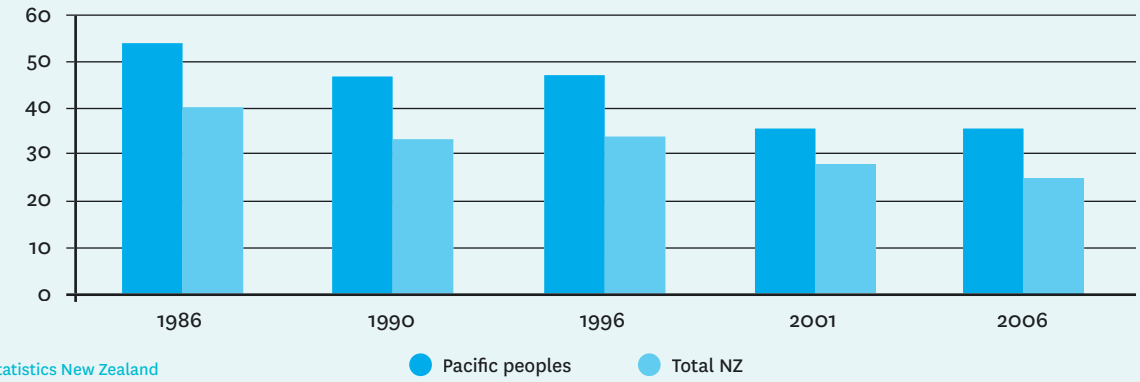
Section 2: Education pathways

The gap between the average income of people with no educational qualifications and those with either a secondary school qualification or a post-secondary qualification has increased over the last 25 or so years, and is likely to continue to do so[10].

The education system, including industry training, has a central role in enabling Pacific peoples to gain the skills and knowledge required to enter high-skilled occupations with high future demand. Higher education is closely linked to income and general wellbeing, as well as labour productivity[11].

Of all groups, Pacific peoples have the smallest proportion with degrees or higher qualifications and the largest proportion with no qualifications at all. However, this has improved significantly between 1986 and 2006, as figure 2 shows:

Figure 2: Percentage of Pacific peoples with no qualifications from 1986 to 2006.



Source: Statistics New Zealand

What is required for high-skilled, high-growth employment?

Literacy and numeracy

Strong literacy and numeracy skills are a prerequisite for effective participation in higher education, most employment, and wider society. Low levels of literacy and numeracy not only reduce Pacific peoples' education and work options, but also affect their families and children. The wider effects are not only from lower family income, but can also contribute to intergenerational disadvantage in terms of education, health and employment outcomes[12].

Positive trends

The 2008 National Educational Monitoring Project (NEMP)[13] results for Reading and Speaking show that over the last eight years, the significant disparities between Pākehā and Pacific students have reduced a little for Year 4 students (aged 8) but the gap has stayed the same or increased for Year 8 students.

Concerning trends

In 2006, the overall literacy and numeracy of the adult Pacific population was lower than that of other ethnic groups. Pacific women had slightly higher skills than Pacific men.

10 Cotterell et al, 2008
11 Callister & Didham, 2008
12 For example, go to http://www.literacytrust.org.uk/socialinclusion/parents/intergeneration.html
13 The National Educational Monitoring Project (NEMP) assesses two areas of learning every year with a national sample of year 4 and year 8 students.

While older Pacific people tended to have lower literacy than young people, it is not just a generational issue that will resolve itself with time. In 2006, Pacific adults aged 25 to 34 had substantially higher skills than those aged 16 to 24, as well as older Pacific adults[14].

Success at school

To enter the high-growth, high-paid sectors generally requires degrees, and often post-graduate-level study. Before this becomes a possibility, the qualifications required for entry to higher education need to be obtained at school. Success at school is therefore a key prerequisite for Pacific peoples gaining higher-level qualifications. While it is possible to study school-level qualifications in tertiary education, this has many costs, including amassing student loans for low-level qualifications. Interestingly, Pacific students who go to high-decile schools are more likely to move to tertiary education than Pacific students with the same school achievement who go to low-decile schools[15]. This may be due to school, peer and family expectations and aspirations.

Positive trends

Since 2004, the proportion of Pacific school leavers achieving the standards required to enter university improved by 62 percent, compared to non-Pacific school leavers who had a 34 percent improvement over the same period[16].

Concerning trends

Only 22.8 percent of all Pacific school leavers achieve the standards required to enter university compared with 48.3 percent of Pākehā students and 65.3 percent of Asian students.

The evidence is clear that the school system does not perform well for many Pacific students:

- In the 2005/06 Progress in International Reading Literacy Study (PIRLS) 16 percent of Year 5 Pacific students did not reach the Low International Benchmark compared with four percent of Pākehā students. The results had not improved since the 2001 PIRLS[17].
- The 2006 Programme for International Student Assessment (PISA) results show an increasing gap between Pacific 15-year-old students and their Pākehā and Asian counterparts[18].
- National Certificate in Educational Achievement (NCEA) results show that Pacific students' achievement has improved since 2004, but that they still achieve significantly less well at all levels. Only 47.9 percent of Year 11 Pacific students achieved NCEA level 1 compared with 79.5 percent of Pākehā students (upcoming MPIA report on Pacific Progress).

Subject and career choices

The choice of subjects on entry to secondary school can open up or close off future education and career opportunities. To enter higher-level tertiary education, students need to achieve NCEA level 3 with subjects that meet the requirements to enter university[19]. This often means that choices in Year 9 and 10 can close off future university pathways.

A recent report on student decision-making found the following:

1. *Decision-making is a complex process.*
   Studies identified a considerable array of psychological and social decision-making processes and factors. These create a very complex process.
2. *Decision-making can be modelled.*
   A number of models attempt to capture the decision-making process.
3. *Decision-making starts very early.*
   Studies consistently found that decisions are made earlier than Years 11 and 12.

Data on the decision-making of 'non-traditional' students are both scarce and mixed. Socio-economic class and membership of 'at risk' groups are major influences on decision-making. Ethnicity and age have some influence, while data on gender suggest that this variable has little effect.[20]

14 http://www.educationcounts.govt.nz/publications/series/ALL/54836/3
15 upcoming report by Ralf Engler, Ministry of Education
16 http://www.educationcounts.govt.nz/indicators/education_and_learning_outcomes/qualifications/1891
17 http://www.educationcounts.govt.nz/publications/series/2539/pirls_0506/16400
18 http://www.educationcounts.govt.nz/publications/series/2543
19 To get NCEA level 1, students must gain 80 credits, including 8 from numeracy standards and 8 from literacy standards. NCEA level 2 requires a minimum of 60 credits at level 2 or above and 20 other credits; For NCEA level 3 students need 80 credits, of which 60 must be at level 3 or above, and 20 at level 2 or above. To gain entry to a New Zealand university, students need 42 credits at level 3 or above from a set list of subjects, as well as some literacy and numeracy requirements.
20 Source: http://www.educationcounts.govt.nz/publications/tertiary_education/5723

Positive trends

The National Certificate of Educational Achievement and the National Qualifications Framework provide more choice for students, which enable them to follow their interests and meet their varied aspirations.

A range of alternative pathways is now available to better engage some students in learning[21].

Concerning trends

At higher levels, secondary schools are not ensuring that Pacific students make subject choices that open up future opportunities. Pacific students tend to choose less academic subjects for NCEA and fewer from the list of courses approved for university.

Of the students who studied for NCEA, Pacific students were least likely to gain the requirements to enter university through that study[22]. Only 22.8 percent of all Pacific students achieve the requirements to enter university compared with 48.3 percent of Pākehā students and 65.3 percent of Asian students. Pacific students also have a pattern of achieving NCEA level 2 in Year 13, which means they cannot complete level 3 NCEA while still at school. Pacific students are more likely than most to choose or be directed by teachers into NCEA courses that do not ultimately meet the requirements to enter university[23]. This then prevents them from moving into higher education. Pacific students are more likely than most to say that friends' choices rather than their own career aspirations influenced their subject choices[24].

Pacific students tend to move on to lower-level tertiary education or straight into the labour market. The Youth2000 study identified that Pacific students were less likely to be planning further training or education than Pākehā students.[25] Three out of 10 Pacific young women and over one third of Pacific young men planned to start work or look for a job when they finished school.

The proportion of Pacific students moving from school to tertiary study has been and still is much lower than that of Asian and Pākehā students. This may have something to do with the previously buoyant labour market. Wylie et al (2009) reported that more Māori and Pacific 16-year-old students intended to go on to work than other groups. When Pacific school students do go on to tertiary education, they are much more likely to study for level 1 to 3 certificates than for diplomas or degrees. This largely reflects their level of school achievement[26].

Influence of parents and families

Parents have a range of powerful effects on students' post-school aspirations and decisions, both directly and indirectly[27].

Parents' own education level, occupation and income have an effect on the expectations of students and their families[28]. An increasing proportion of primary caregivers of school-aged children have at least a degree-level qualification, with Pacific primary caregivers showing the greatest increase since 2001, from 2.8 percent in 2001 to 5.3 percent in 2006. In 2006, 18 percent of Pākehā primary caregivers, 7.5 percent of Māori caregivers and 30 percent of Asian caregivers had degrees[29].

The probability of attending university increases with parental income even when school achievement is taken into consideration. Likewise, the probability of attending university or polytechnic decreases as the income decreases. This is largely due to the level of information available and family expectations and experiences, or 'social and personal fit'. When a family has prior experience of tertiary education, children are more likely to consider tertiary study and to be better able to navigate it.

When the social or personal fit is not comfortable, students are less likely to continue on to higher education[30]:

21 Trades Academies: http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/Initiatives/TradesAcademies.aspx
Gateway: http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/Initiatives/STAR/StayingAtSchoolCaseStudies.aspx
Secondary Tertiary Alignment Resource (STAR): http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/Initiatives/STAR/StayingAtSchoolCaseStudies.aspx
22 Madjar et al, 2009
23 Hipkins et al, 2005
24 Madjar et al, 2009
25 Youth2000 survey: http://www.youth2000.ac.nz/
26 http://www.educationcounts.govt.nz/publications/series/tes/51475/4
27 Source http://www.educationcounts.govt.nz/publications/tertiary_education/5723
28 Maani, 2000 cited in Leach & Zepke, 2005
29 http://www.educationcounts.govt.nz/indicators/indicator_page/all_indicators/1987
30 James, 2000 cited in Leach & Zepke, 2005

When a family has some experience of tertiary education, children are more likely to consider post-school options and are better able to navigate the complex application and enrolment procedures. Parents' own education is an important factor in this process, although friends and other family members, who have current or recent higher education experience, can become 'positive influencers'.

Family aspirations are as important as experiences. For example, with regard to Pacific students, the low rate of participation in Modern Apprenticeships suggests that this pathway is not given priority by Pacific students or their families, despite the fact that a significant proportion of Pacific adults participate in industry training.

Information sharing between students, families, schools and tertiary providers is the most effective way to influence study and career choices. The effect of mass marketing is over-rated and information obtained through interpersonal relationships is found to be more effective. Interpersonal information is most effective when constantly exchanged by students, families, schools and tertiary providers as active partners in the decision-making process.[31]

Participation in tertiary education

In April 2009, Pacific students' participation in tertiary education increased from the previous year more than that of any other ethnic group: 14 percent for Pacific men and 12 percent for Pacific women[32]. Pacific women outnumbered men in tertiary education in 2008 (17,500 women compared to 12,300 men)[33].

In 2007, the number of Pacific students continued to increase, with the greatest increases for those aged over 40 (16 percent) and 18 to 19 (11.2 percent).

Table 9: Numbers of Pacific students in tertiary education

	1997	*2002*	*2005*	*2006*	*2007*	*2008*
Age group						
Under 18 years	347	1,305	1,874	1,542	1,590	1,562
18 to 19 years	1,587	3,349	3,804	4,216	4,690	4,973
20 to 24 years	3,012	5,962	6,598	6,593	6,892	7,146
25 to 39 years	3,350	8,357	10,227	9,490	10,038	9,917
40 years and over	1,097	3,537	5,798	5,247	6,087	6,192

Source: http://www.educationcounts.govt.nz/publications/series/36769/36777
http://www.educationcounts.govt.nz/__data/assets/excel_doc/0008/41948/Provider-based-enrolments31109.xls#ENR.7!A1

Appendix 1 has more information about Pacific students' tertiary education choices from 1997 to 2007.

31 http://www.educationcounts.govt.nz/publications/tertiary_education/5723.
32 Wensvoort, 2009
33 Ministry of Education data.

Benefits from higher levels of study

To gain the greatest benefits from tertiary education, people need to complete higher-level qualifications (diplomas and degrees), and complete them before they are 25 years of age.

Positive trends

Enrolments by under-25-year-olds at diploma or degree level have risen more strongly for Pacific students than for all students, an increase of 7.4 percent between 2002 and 2007 compared with 3.2 percent for other students.

Pacific students who complete their qualifications are more likely than others to progress to further study, and generally earn a higher income than non-Pacific people with the same qualification.

At master's level, the number of Pacific students has continued to increase with 343 students in 2007, 202 of which were women. There were 361 Pacific masters students in 2008. At doctoral level, there were 118 Pacific students in 2007, 8.3 percent higher than in 2006. 71 of the doctoral students were women, compared with 47 men. In 2008, there were 122 Pacific doctoral students, an increase of 3.4 percent from 2007[34].

Concerning trends

Currently, Pacific students are over-represented in lower-level tertiary education rather than higher education.

Pacific peoples are about half as likely as the total population to achieve a higher-level qualification by the age of 25. They are only a third as likely to achieve a bachelor's degree by this age.

Pacific students who begin study at 18 or 19 are less likely to complete a diploma or degree qualification than other students.

Benefits from certificates and diplomas[35]

Positive trends

Gaining an industry training qualification at level 4 or higher improves the earnings of men aged 15 to 24 years by 11 percent after 48 months.

For provider-based study, the fields with the highest median earnings for diplomas were building, education, sales and marketing, and engineering. These fields still had the highest earnings after three years, except for education which had slower growth.

Concerning trends

Gaining an industry training qualification at level 4 or higher improved the earnings of women only by two percent and the earnings of men over 24 by between one and four percent.

Gaining a qualification at level 3 (certificate) improved the average earnings of males but not females.

For provider-based study, performing arts, sports and recreation, visual arts and crafts, and personal services had lower median earnings both one year and three years' post-study.

Benefits from areas of study

In general, qualifications in the more vocationally specific or professionally associated fields of engineering, information technology, architecture and building, and health earned the most. Qualifications in science or management and commerce earned in the middle range, while qualifications in society and culture, creative arts, and food, hospitality and personal services earned less than in other fields. See appendix A for student choices.

Positive trends

Twenty-eight percent of Pacific students were enrolled in the field of management and commerce in 2007, compared to 20 percent of all domestic students.

Pacific students make up 6.1 percent of all students enrolled in society and culture. Of those enrolments, Pacific students made up 6.5 percent of law students (high pay) and 7.5 percent of sports and recreation students (high future demand) in 2008[36].

Concerning trends

Around 22 percent of Pacific students were enrolled in the area of society and culture at all levels in 2008. At bachelor level, 58 percent of Pacific students in 2008 studied in this field compared with 54 percent of all students, and a higher proportion of Pacific

34 Ministry of Education data.

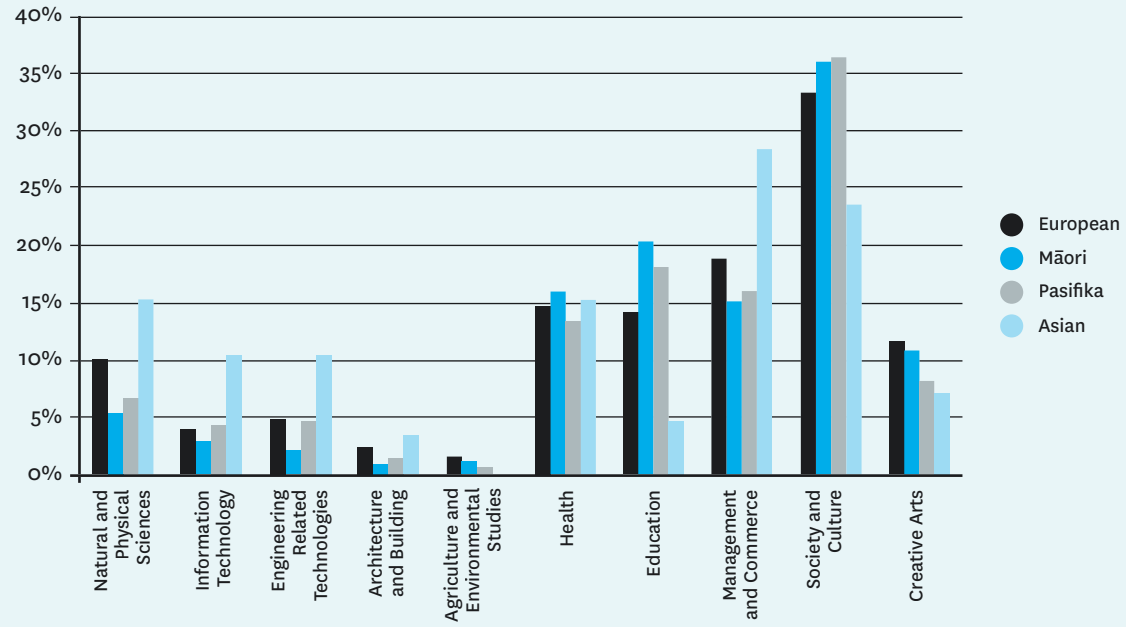
35 http://www.stats.govt.nz/Publications/WorkKnowledgeAndSkills/LEED-reports/eote-workplace-based-industry-training-improve-earnings.aspx and http://www.stats.govt.nz/publications/workknowledgeandskills/leed-reports/eote-what-do-students-earn-after-their-tertiary-education.aspx

36 http://www.educationcounts.govt.nz/__data/assets/excel_doc/0016/41704/Fos_enrl_tables311109.xls
http://www.educationcounts.govt.nz/__data/assets/excel_doc/0019/41716/Fos_grad_tables-07122009.xls
http://www.educationcounts.govt.nz/publications/series/36769/36777

students were enrolled in the lower-paying areas. 11.5 percent of Pacific students were enrolled in the lower-earning areas of general society and culture, and only five percent were enrolled in the higher-earning economics areas (compared with 6.1 percent of Pacific enrolments in this field overall).

Fewer Pacific students than total domestic students were attracted to the fields of engineering (5.3 percent compared to 7.4 percent), the natural and physical sciences (3.4 percent compared to 6.1 percent), health (5.7 percent compared to 8.0 percent), and agriculture (1.1 percent compared to 4.1 percent).

Figure 3: Percentage of domestic bachelor's degree graduates in 2006 by broad field of specialisation and ethnic group



Source: http://www.educationcounts.govt.nz/publications/tertiary_education/41801/3

A 2009 analysis of bachelor degree enrolments between 2002 and 2006 has found that the fastest-growing areas were biological sciences (up 310 graduates, or 36 percent since 2002), law (up 300, or 28 percent), communication and media studies (up 230, or 54 percent), and social work and counselling (up 210, or 92 percent)[37].

The fastest-declining areas were information technology (down 660 graduates, or 40 percent from 2002), teacher education (down 380, or 15 percent), education studies (down 360, or 28 percent), and accountancy (down 230, or 20 percent)[38].

While Pacific student enrolments in information technology have also declined, their enrolments in sciences have not increased significantly.

The table below shows changes in the broad areas of study by Pacific students between 1997 and 2007.

37 Scott, 2009
38 ibid

Table 10: Pacific students' broad fields of study and shifts between 2006 and 2007

	1997	2002	2005	2006	2007	Change 06-07
Agriculture, environmental and related studies	106	290	437	474	548	15.6%
Architecture and building	294	596	774	838	920	9.8%
Creative arts	298	1,076	1,148	1,168	1,219	4.4%
Education	978	1,838	2,291	2,224	2,265	1.8%
Engineering and related technologies	876	1,567	1,918	1,997	2,316	16.0%
Food, hospitality and personal services	244	777	964	1,041	1,204	15.7%
Health	341	952	1,309	1,416	1,560	10.2%
Information technology	373	2,527	1,917	1,956	1,898	-3.0%
Management and commerce	2,512	6,135	8,599	8,330	9,526	14.4%
Mixed field programmes	910	3,836	5,426	3,850	3,569	-7.3%
Natural and physical sciences	509	716	762	794	804	1.3%
Society and culture	2,293	4,652	5,518	5,287	6,039	14.2%

Source: http://www.educationcounts.govt.nz/publications/series/36769/36777

Benefits from location of study

Overall, completing a degree at a polytechnic generally has the same benefits as completing it at a university. Students who complete a bachelor's degree at a university may earn more than those who completed at a polytechnic five or six years after leaving study, though this doesn't apply in all fields of study. Those who took their degrees at a university[39] in education, health and creative arts had an advantage. Those who studied society and culture, engineering and information technology at a university had a very small advantage – of less than two percent – while the reverse was the case in management and commerce and architecture and building, where those who studied at a polytechnic earned marginally more[40 41].

The study has found that, overall, the median earnings of those entering the workforce with a bachelor's degree from a polytechnic are roughly the same as the median earnings of those with a university bachelor's degree. However, over time, university graduates gain a modest margin over polytechnic graduates[42].

In many areas where the polytechnics have specialised in degree teaching – business, computing and engineering – the differences are very slight and in some fields, polytechnic graduates earn more than university graduates on average. However, bachelor graduates with the highest earnings are more likely to have taken their degree at a university[43 44].

Positive trends

In 2007, 8613 Pacific students studied at universities, 11, 175 at polytechnics or institutes of technology, 2856 at wananga and 7877 at private training establishments. Of the students attending private training establishments (PTEs) in 2008, 12.5 percent were Pacific students (compared with 5.9 percent in universities or polytechnics)[45].

Concerning trends

Most PTEs do not offer study at higher levels, which means that education pathways through PTEs can fizzle out. Evidence from a study of students transferring between tertiary education

39 Note that in this analysis, the data for the colleges of education were absorbed into the universities – this has an impact in particular in degrees in education.
40 Smyth et al, 2009
41 http://www.stats.govt.nz/publications/workknowledgeandskills/leed-reports/eote-what-do-students-earn-after-their-tertiary-education.aspx
42 Smyth et al, 2009
43 Smyth et al, 2009
44 http://www.educationcounts.govt.nz/publications/tertiary_education/35968/35970).
45 Ministry of Education data.

providers found that it can be hard to have previous qualifications or study recognised[46].

Benefits of completing study

Completion of qualifications is very important both for future employment opportunities and to ensure the student gains sufficient benefit from the study to outweigh the costs, such as student loans. However, some students choose to only study specific courses for specific purposes, without intending to complete the qualification. These tend to be students who already hold a qualification.

A 2009 study of tertiary education completions found that students who passed all courses but left with no qualification generally earned more in their first year than those who had left with a qualification[47]. This was true for all levels, except level 4 certificates and bachelor's level. By the third year of earnings this advantage still remained for level 1 to 3 certificates and diploma level, but had disappeared for other levels. Students who completed a degree, however, generally earned about 30 percent more than those who did not complete[48].

Positive trends

Pacific peoples who complete bachelor's degrees get greater benefits in the level of their income than Pākehā people[49].

Looking at five-year completion rates, 49 percent of Pacific students complete their qualifications in PTEs compared with an average completion rate of 34 percent for Pacific students across the rest of the sector[50].

A New Zealand study of tertiary education in PTEs has found that some things are particularly important for supporting the success of Pacific students[51]. These include:

- the use of an holistic approach
- meeting learners where they are at
- the use of celebration, fun, and humour
- a family atmosphere that encourages and accepts Pacific learners[52].

Concerning trends

Overall, 38 percent of Pacific students complete their qualification within five years of starting compared with 41 percent of Pākehā students[53].

Of full-time students beginning certificate-level study in 2006, 47 percent of Pacific students completed their study compared with 59 percent of all students after three years. 39 percent of Pacific students completed their qualification at diploma level after three years compared with 53 percent of all students.

At bachelor's level, 40 percent of Pacific students completed their degree after five years compared with 65 percent of all students.

A recent annotated bibliography has found that the key barriers to retention for Pacific students ranged from personal attitudes and a lack of motivation, to financial pressures and the learning environment. Overall, 'integration' was the most common barrier discussed[54]. Integration problems include:

- feelings of social and academic isolation
- no feeling of belonging
- a lack of involvement in the academic and social spheres of campus
- no 'critical mass' of students from similar backgrounds (ethnic and/or socio-economic)
- a lack of diversity (ethnic and/or socio-economic)
- a lack of student networks, both with other students and with campus staff.

46 Scott, D. (2008). Different Tracks - a look at the different ways New Zealanders get tertiary qualifications. Tertiary Sector Performance Analysis & Reporting, Ministry of Education downloaded from http://www.educationcounts.govt.nz/publications/tertiary_education/29313/29314
47 Scott, 2009
48 http://www.stats.govt.nz/Publications/WorkKnowledgeAndSkills/LEED-reports/eote-what-do-students-earn-after-their-tertiary-education.aspx
49 Ministry of Education, 2008(d).
50 Tertiary Education Commission, 2009
51 Marshall et al, 2008
52 ibid
53 http://www.educationcounts.govt.nz/publications/series/?a=973
54 Ministry of Pacific Island Affairs, 2010

Initial teacher education

While Pacific students made up 9.6 percent of state school rolls in 2007, Pacific teachers make up only 2.8 percent of the teaching workforce. However, this proportion of Pacific teachers has increased by 24 percent since 2002.[55] The number of Pacific teacher trainees has increased from seven to eight percent of all enrolled trainees between 2003 and 2008. However, the number graduating is less than the number who originally enrolled. In 2008, 6.1 percent of the teacher graduates were Pacific teachers.

Table 11 below shows the proportion of teacher graduates who were Pacific between 2003 and 2008

Table 11: Proportion of Pacific teacher graduates between 2003 and 2008

Ethnic group	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*
Pacific	5.0	4.1	5.2	4.6	4.3	6.1
Asian	6.5	7.3	8.8	8.1	6.1	10.4
NZ Māori	13.7	12.6	12.1	13.5	13.1	13.1
Pākehā	78.1	78.1	73.1	75.3	75.4	70.0

Source: Ministry of Education data

Education and training opportunities in employment

Many people in the workforce are also studying through tertiary education organisations, often supported by employers.

Positive trends

Data about Pacific participation in tertiary education show a large number of Pacific adults over the age of 40 enrolled at tertiary education providers in 2007.

A significant proportion of Pacific adults also participate in work-based learning through industry training. Industry training provides an important opportunity for people in the workforce to gain formal qualifications and upgrade their skills.

Pacific peoples are 4.9 percent of the workforce. In 2008, the number of Pacific trainees participating in industry training was 12,933 – up from 10,913 in 2006. Pacific trainees now make up seven percent of all industry trainees. This increase has been steady over the last few years[56].

Concerning trends

However, Pacific peoples in industry training are more likely to be studying towards lower-level credits.[57] In 2008, 48 percent of Pacific trainees were in level 3 or higher industry training programmes compared with 65 percent of all trainees.

This may be partly due to the higher number of Pacific trainees with no previous qualifications: 33 percent compared with 20 percent of all participating trainees. Pacific trainees tend to be concentrated in industries such as building services and materials processing[58].

The proportion of Pacific young people entering Modern Apprenticeships is relatively low, and the reasons for this is unclear. The proportion of Pacific trainees actually declined between 2007 and 2008 (from 3.5 percent of trainees to 3.1 percent). Pacific trainees are also less likely to complete apprenticeships than Pākehā trainees.

Key Messages

Effective schooling and sound subject choices in secondary school are critical prerequisites for Pacific students to enter and succeed in the higher-level tertiary education required for employment in areas of high future demand and benefits.

Embarking on a 'career' is now a very different thing from having a career in the past. The rapidly changing labour market means that a career is now more of a process, and careers decision-making is not a single decision at a single point in time.[59]

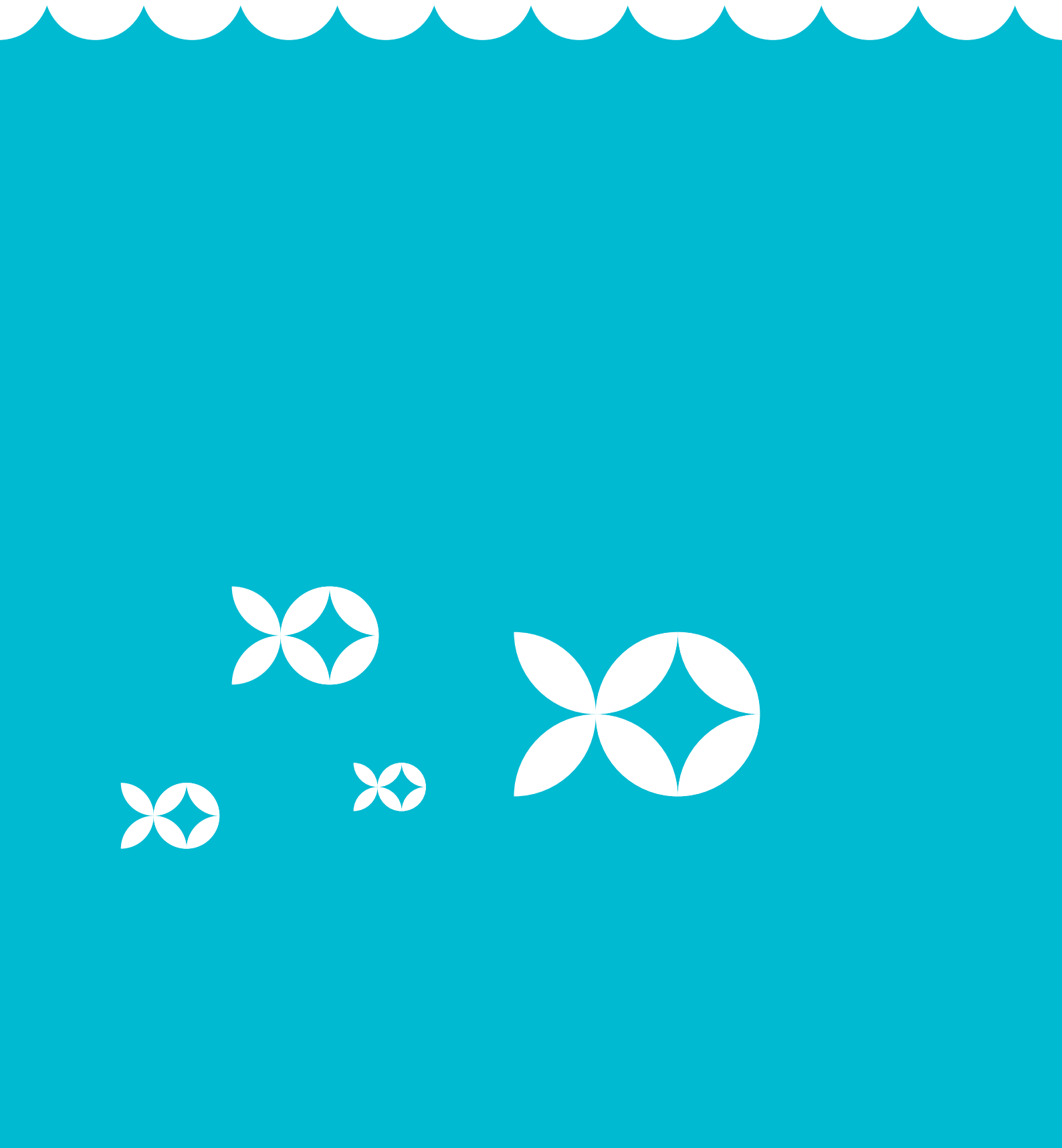
55 PEP monitoring report 2007 at http://www.educationcounts.govt.nz/publications/series/22967/30841/30843
56 TEC, http://www.tec.govt.nz/upload/downloads/industry-training-report-2008.pdf
57 http://www.educationcounts.govt.nz/publications/series/tes/51477/
58 TEC, 2009
59 http://www.nzcer.org.nz/pdfs/14869.pdf

Although the early decisions about study are important, they are not the only decisions about careers that people will need to make. This also means that narrow fields of study could be limiting in the future, and that all people need to have a broad range of skills to enable them to change and adapt to new employment demands. This makes it very difficult to provide advice about the best career options for the future.

Despite the difficulties and dangers inherent in predicting the 'best jobs' for the future, some things are reasonably clear from the current evidence and predictions:

- on the whole, any degree is a good qualification to have
- the completion of a degree before the age of 25 has the highest benefits
- a degree in an area of future demand is even better, such as engineering (especially civil engineering), architecture, and industrial, manufacturing and mechanical engineering and technology, as well as engineering technicians
- specialised managers and business professionals are two other occupations with high future demand where Pacific peoples are not currently well represented (although they are studying in these areas now at higher rates)
- teaching and education leadership is likely to be an area of high demand for Pacific peoples considering the increase in the Pacific population within New Zealand, and could also help improve education outcomes for pacific students, and
- Diplomas (National Qualifications Framework (NQF) level 5 and above) are a useful qualification too, especially in technical and professional areas such as engineering technicians, and especially for men.

Modern Apprenticeships is a useful pathway to high-demand trade qualifications, but Pacific participation is low and completion is lower than that of other groups. It is not clear why this is. Industry training pathways generally lead to high-demand diplomas, but they only have clear income benefits for male employees. Few industry pathways lead to degree-level qualifications. This means that employees wanting to progress to degrees have to engage in independent study or negotiate study time and support as part of their employment.



Section 3: Conclusion and policy options

When considering the employment futures of Pacific peoples, there are two distinct groups with different requirements:

- *students and recent Pacific graduates, and*
- *current Pacific workforce.*

Students and recent Pacific graduates

Education statistics clearly show that the biggest barrier for young Pacific people entering higher education is the poor performance of the education system in primary and secondary schooling. With only 22.8 percent of Pacific school leavers able to enter university compared with 48.3 percent of Pākehā students, the biggest challenge to success for Pacific students lies in the school sector.

In addition, more Pacific school leavers than other groups are choosing to go straight into the labour market rather than tertiary education.

For those Pacific students who do enter tertiary education, the data from both the labour market and education suggest that many of them understand the labour market and are choosing their areas of study accordingly. The increase in numbers of Pacific students studying engineering, architecture and building is promising considering the high future demand. Similarly, the increase in Pacific students enrolled in agriculture and medical studies is positive. However, there is still a large proportion studying in areas with low future returns, such as general humanities and social sciences. Retention and completion rates are also an issue for Pacific students.

There is a need for a stronger shift towards Pacific students enrolling in higher-level qualifications in engineering, related engineering technologies, building, architecture, and (higher-level) medical studies to benefit from the higher incomes and potential growth of these areas in the future.

The strong growth in Pacific peoples studying in food, hospitality and personal services will be useful to meet increasing demand in these areas. However, these areas of work tend to have rapid turnover and are not usually highly paid. It will be important that lower-level qualifications in these areas can be built upon to gain higher-level qualifications that will open up more profitable employment opportunities.

The increases in Pacific peoples' participation in health, management and commerce are more likely to bring them significant benefits if they undertake higher-level qualifications and seek careers in high-growth areas such as business services, arts and recreation, and health care.

While teaching is not forecast to be a high growth area, there is likely to be high demand for Pacific teachers and principals due to the increasing proportion of Pacific children in the New Zealand population, particularly in Auckland. The presence of more Pacific teachers and principals may also help to raise the performance of schools for Pacific students.

Current Pacific workforce

The current Pacific workforce has made different choices from the current and recent graduates. Bigger shifts are required here if current Pacific employees are to benefit from high-growth areas in the labour market. Overall, it will be necessary to lift the levels of qualifications of Pacific employees and shift from low-demand industry areas to higher-demand areas. This will require a mix of education opportunities and careers information and guidance.

Challenges ahead

There seem to be three key challenges for Pacific peoples' participation in areas of employment which have high future demand and high benefits. These are:

- effective primary and secondary schooling that ensure education success for Pacific students
- effective subject choices that open up future education and career pathways, including Pacific students' and families' career aspirations and understanding of key areas of future demand
- retention and progression in tertiary education, including progression to higher-level study through industry training pathways.

Education agencies are well aware of the need to increase education system performance for Pacific students in school, and retention and progression for Pacific tertiary education students.

The Ministry of Education has developed the Pasifika Education Plan 2009–2012 (PEP) to focus activity on what will make the most difference for improving education outcomes for Pacific students. The vision expressed in the revised PEP is that:

> ***The education system must work for Pasifika so they gain the knowledge and skills necessary to do well for themselves, their communities, New Zealand, the Pacific region and the world.***

The Plan seeks to achieve this vision by focusing actions on areas with high Pacific populations as well as identifying what will make the most difference for Pacific students, namely:

- building strong learning foundations
- lifting literacy and numeracy achievement by using national standards to improve teaching and plain-language reporting to parents
- increasing the number of students achieving and leaving school with qualifications.

The PEP also sets aspirational but realistic targets to monitor government's success. These are monitored through an annual report, the Pasifika Education Plan Monitoring Report.[60]

Key priorities of the Tertiary Education Strategy include:

- increasing the number of young people (aged under 25) achieving qualifications at levels 4 and above, particularly degrees
- increasing the number of Pacific students achieving at higher levels
- increasing the number of young people moving successfully from school into tertiary education
- improving literacy, language, and numeracy and skills outcomes from levels 1 to 3 study.

The Tertiary Education Commission (TEC) is working to give effect to its strategic direction and priorities, which include improving the performance of Pasifika learners to achieve in greater number and at higher levels in tertiary education.

The Career Services provides career education and planning assistance services and products to Pacific young people (approximately 1300 young people annually, seeking to increase the numbers in 2009/10), their families and communities. Career Services aims to see more Pacific young people using a range of career-planning services including the tools we have online and by phone.

Policy options for further exploration

Policy options for improving the labour market prospects of Pacific peoples include:

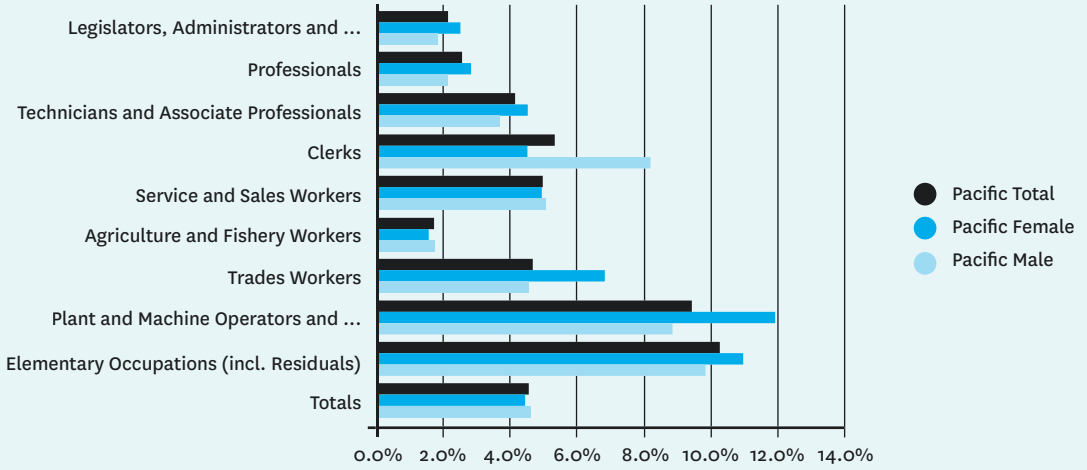
- Significantly improving education system performance for Pacific students from early childhood to secondary school, with a key focus on securing the foundations for learning in the early years of school. *The Pasifika Education Plan* provides a framework for this change but effective implementation of the plan requires interagency collaboration and a commitment to resourcing the changes required. Key agencies: the Ministry of Education, Education Review Office, and Teachers Council with the Ministry of Pacific Island Affairs.
- Lifting students' own expectation of themselves and their subject and career pathways through personal mentoring initiatives such as MATES.[61] Key agencies: the Ministry of Education, Career Services and the New Zealand Qualifications Authority with the Ministry of Pacific Island Affairs.
- Supporting Pacific parents to better understand education options and the best future employment opportunities early so they can ensure that the school does not push their children into dead-end courses. Key agencies: the Ministry of Pacific Island Affairs with the Ministry of Education, the New Zealand Qualifications Authority and Career Services.
- Promoting high-demand career opportunities to Pacific communities. Key agencies: the Ministry of Pacific Island Affairs with the Department of Labour.
- Encouraging Pacific peoples to enter the teaching profession. Key agencies: Career Services, Ministry of Education, with the Ministry of Pacific Island Affairs.

60 Go to http://www.minedu.govt.nz/NZEducation/EducationPolicies/PasifikaEducation/PolicyAndStrategy/PasifikaEducationPlan.aspx
61 http://www.greatpotentials.org.nz
http://www.auckland.ac.nz/uoa/ss-mentoring-opportunities-and-projects. Key agencies: MPIA with TEC and MOE.

- Focusing on enhancing completions in Modern Apprenticeships and degrees. Key agencies: the Tertiary Education Commission with the Ministry of Pacific Island Affairs.
- Enhancing pathways between tertiary education providers to facilitate changes or progression in qualifications. Key agencies: the Ministry of Education and the Tertiary Education Commission.
- Enabling industry training pathways to link to higher education opportunities. Key agencies: the Ministry of Education with Industry Training Federation and the Tertiary Education Commission.
- Promoting education/industry training options for low-skilled service-sector jobs. Key agencies: the Ministry of Pacific Island Affairs with the Industry Training Federation and the Tertiary Education Commission.

Appendix 1: Further data

Pacific Peoples Representation in Occupational Groups



Growth Demand by Industry Group

Industry Group	*2008 Employed*	*2008 Employed %*	*2018 Growth Demand*	*2018 Growth Demand as % 2008 Employed*
Agriculture, Forestry and Fishing	155,840	7.3%	2,884	1.9%
Mining	5,002	0.2%	-61	-1.2%
Manufacturing	259,458	12.1%	828	0.3%
Electricity, Gas, Water and Waste Services	5,332	0.2%	-58	-1.1%
Construction	170,825	8.0%	666	0.4%
Wholesale Trade	123,020	5.8%	1,491	1.2%
Retail Trade	257,252	12.0%	-1,686	-0.7%
Accommodation and Food Services	119,343	5.6%	1,835	1.5%
Transport, Postal and Warehousing	81,902	3.8%	1,772	2.2%
Information Media and Telecommunications	24,751	1.2%	543	2.2%
Financial and Insurance Services	53,321	2.5%	747	1.4%
Rental, Hiring and Real Estate Services	49,709	2.3%	1,777	3.6%
Business Services	277,521	13.0%	10,254	3.7%
Public Administration and Safety	66,851	3.1%	444	0.7%
Education and Training	185,347	8.7%	-596	-0.3%
Health Care and Social Assistance	169,664	7.9%	7,922	4.7%
Arts and Recreation Services	58,177	2.7%	2,439	4.2%
Other Services	72,191	3.4%	2,966	4.1%
Total	**2,135,505**	**100.0%**	**34,165**	**1.6%**

Source: Department of Labour (DoL) employment estimates and forecasts, June 2009

Pacific students' tertiary study choices 1997-2007

	1997	2002	2005	2006	2007	Change 06-07
Pacific students' broad fields of study						
Agriculture, environmental and related studies	106	290	437	474	548	15.6%
Architecture and building	294	596	774	838	920	9.8%
Creative arts	298	1,076	1,148	1,168	1,219	4.4%
Education	978	1,838	2,291	2,224	2,265	1.8%
Engineering and related technologies	876	1,567	1,918	1,997	2,316	16.0%
Food, hospitality and personal services	244	777	964	1,041	1,204	15.7%
Health	341	952	1,309	1,416	1,560	10.2%
Information technology	373	2,527	1,917	1,956	1,898	-3.0%
Management and commerce	2,512	6,135	8,599	8,330	9,526	14.4%
Mixed field programmes	910	3,836	5,426	3,850	3,569	-7.3%
Natural and physical sciences	509	716	762	794	804	1.3%
Society and culture	2,293	4,652	5,518	5,287	6,039	14.2%
Sub-sector						
Universities	3,176	6,227	7,891	8,134	8,613	5.9%
Institutes of technology and polytechnics	5,514	6,751	10,369	9,860	11,175	13.3%
Colleges of education	767	963	130	134		
Wānanga	113	2,805	4,074	2,496	2,856	14.4%
Public providers	9,400	16,265	21,820	20,203	22,139	9.6%
Private training establishments	na	6,864	7,211	7,577	7,877	4.0%

Source: http://www.educationcounts.govt.nz/publications/series/36769/36777

Pasifika tertiary education students by selected characteristics

	Student enrolments						Equivalent full-time students					
Type of qualification (domestic students)	***1997***	***2002***	***2005***	***2006***	***2007***	***Change 06-07***	***1997***	***2002***	***2005***	***2006***	***2007***	***Change 06-07***
Students in formal qualifications > 0.03 EFTS[1]	9,400	22,510	28,301	27,088	29,297	8.2%	6,109	15,058	18,035	17,756	19,027	7.2%
Students in formal qualifications < 0.03 EFTS[2]	na	na	9,421	4,890	4,894	0.1%	na	86	359	230	275	19.5%
Students in informal education programmes[3]	na	na	7,623	4,902	3,955	-19.3%	na	968	527	335	254	-24.3%
Domestic students enrolled in formal qualifications > 0.03 EFTS[1]												
Qualification level												
Certificates 1-3	3,396	11,419	14,909	12,930	13,473	4.2%	1,672	5,776	6,921	6,320	6,482	2.6%
Certificates 4	428	2,836	4,138	4,199	5,062	20.6%	158	1,736	2,485	2,558	2,955	15.5%
Diplomas 5-7	2,040	3,409	4,089	4,188	4,620	10.3%	1,236	2,267	2,635	2,613	2,797	7.0%
Bachelors	3,546	5,907	6,732	6,947	7,492	7.8%	2,767	4,832	5,415	5,660	6,135	8.4%
Honours and postgraduate cert./dip.	158	315	461	546	608	11.4%	104	184	273	301	321	6.6%
Masters	177	306	327	327	340	4.0%	130	205	197	187	215	14.9%
Doctorates	43	63	95	109	118	8.3%	41	57	110	116	122	4.8%
Age group												
Under 18 years	347	1,305	1,874	1,542	1,590	3.1%	212	931	1,205	1,139	1,049	-7.9%
18 to 19 years	1,587	3,349	3,804	4,216	4,690	11.2%	1,284	2,843	3,310	3,727	4,109	10.2%
20 to 24 years	3,012	5,962	6,598	6,593	6,892	4.5%	2,306	4,521	4,972	5,015	5,286	5.4%
25 to 39 years	3,350	8,357	10,227	9,490	10,038	5.8%	1,788	4,841	5,692	5,231	5,532	5.8%
40 years and over	1,097	3,537	5,798	5,247	6,087	16.0%	517	1,922	2,857	2,644	3,051	15.4%
Broad fields of study												
Agriculture, environmental and related studies	106	290	437	474	548	15.6%	57	119	166	176	204	15.6%
Architecture and building	294	596	774	838	920	9.8%	168	361	429	494	498	0.7%
Creative arts	298	1,076	1,148	1,168	1,219	4.4%	262	849	937	975	1,036	6.3%
Education	978	1,838	2,291	2,224	2,265	1.8%	627	1,299	1,532	1,432	1,427	-0.3%
Engineering and related technologies	876	1,567	1,918	1,997	2,316	16.0%	454	921	983	981	1,001	2.0%
Food, hospitality and personal services	244	777	964	1,041	1,204	15.7%	123	498	669	710	815	14.8%
Health	341	952	1,309	1,416	1,560	10.2%	241	668	863	978	1,079	10.3%
Information technology	373	2,527	1,917	1,956	1,898	-3.0%	202	1,244	921	910	951	4.5%
Management and commerce	2,512	6,135	8,599	8,330	9,526	14.4%	1,439	3,434	4,681	4,747	5,296	11.6%
Mixed field programmes	910	3,836	5,426	3,850	3,569	-7.3%	481	1,772	2,377	2,027	1,939	-4.3%
Natural and physical sciences	509	716	762	794	804	1.3%	378	516	604	647	645	-0.3%
Society and culture	2,293	4,652	5,518	5,287	6,039	14.2%	1,678	3,378	3,872	3,678	4,134	12.4%

1 Students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's duration).
2 Students enrolled at any time during the year with a tertiary education provider in formal qualifications of less than 0.03 EFTS (less than one week's duration).
3 Students enrolled at any time during the year with a tertiary education provider in informal programmes, i.e. programmes not registered on the New Zealand Register of Quality Assured Qualifications.

Pasifika tertiary education students by selected characteristics *(continued)*

	Student enrolments						Equivalent full-time students					
Type of qualification (domestic students)	***1997***	***2002***	***2005***	***2006***	***2007***	***Change 06-07***	***1997***	***2002***	***2005***	***2006***	***2007***	***Change 06-07***
Sub-sector												
Universities	3,176	6,227	7,891	8,134	8,613	5.9%	2,577	5,049	6,274	6,544	6,958	6.3%
Institutes of technology and polytechnics	5,514	6,751	10,369	9,860	11,175	13.3%	3,002	3,803	4,996	4,684	5,159	10.1%
Colleges of education	767	963	130	134			439	727	86	79		
Wānanga	113	2,805	4,074	2,496	2,856	14.4%	91	1,359	2,019	1,333	1,588	19.2%
Public providers	9,400	16,265	21,820	20,203	22,139	9.6%	6,109	10,938	13,375	12,640	13,706	8.4%
Private training establishments	na	6,864	7,211	7,577	7,877	4.0%	na	4,119	4,660	5,116	5,321	4.0%
Study type												
Full-time full-year	4,108	8,655	10,153	9,958	10,598	6.4%	4,229	9,596	11,242	10,965	11,757	7.2%
Full-time part-year	1,452	4,336	5,203	5,182	5,389	4.0%	762	2,428	2,793	2,823	2,905	2.9%
Part-time full-year	2,286	3,805	4,930	5,092	5,140	0.9%	818	1,682	2,258	2,382	2,404	0.9%
Part-time part-year	1,554	5,714	8,015	6,856	8,170	19.2%	301	1,352	1,742	1,586	1,961	23.6%
Female / Male												
Female	4,980	13,308	17,035	16,091	17,200	6.9%	3,280	8,934	11,142	10,886	11,662	7.1%
Male	4,413	9,202	11,266	10,997	12,097	10.0%	2,827	6,124	6,893	6,870	7,365	7.2%
Gaining qualifications and age-standardised participation rate												
Number of students who completed a qualification	1,808	4,376	6,088	6,185	na							
Number of qualifications completed	1,987	4,818	6,811	7,042	na							
Pasifika students participation rate	na	10.3%	12.6%	11.3%	12.0%							
All students participation rate	8.4%	12.2%	14.1%	13.6%	13.3%							

Notes:
1. The equivalent full-time student count used in this report does not equate to the funded equivalent full-time student count. The data is also not adjusted to allow for students who do not complete their study programme.
2. The colleges of education have merged with nearby universities over the last decade.

The 10 most common narrow fields of specialisation for Māori, Pasifika, Pākehā and Asian domestic bachelors degree graduates in 2006 - Part 1

Māori	*% of all Māori graduates*	*Pasifika*	*% of all Pasifika graduates*
Teacher Education	16.4%	Teacher Education	13.5%
Studies in Human Society	10.8%	Studies in Human Society	10.2%
Business and Management	8.9%	Business and Management	8.1%
Nursing	6.4%	Law	6.9%
Language and Literature	6.0%	Language and Literature	6.2%
Law	5.6%	Nursing	5.4%
Curriculum and Education Studies	5.6%	Curriculum and Education Studies	5.2%
Human Welfare Studies and Services	5.5%	Human Welfare Studies and Services	4.9%
Sales and Marketing	4.2%	Sales and Marketing	4.9%
Behavioural Science	4.0%	Behavioural Science	3.5%
Public Health	3.6%	Biological Sciences	3.3%
Biological Sciences	3.2%	Accountancy	3.3%

Notes: Excludes 'not elsewhere classified', 'mixed', and 'not further defined' categories. Students can be counted in more than one field. See Section 3 for more details.

The 10 most common narrow fields of specialisation for Māori, Pasifika, Pākehā and Asian domestic bachelors degree graduates in 2006 - Part 2

Pākehā	*% of all Pākehā graduates*	*Asian*	*% of all Asian graduates*
Teacher Education	10.8%	Accountancy	10.5%
Business and Management	8.3%	Business and Management	9.9%
Studies in Human Society	8.1%	Sales and Marketing	7.0%
Sales and Marketing	6.7%	Biological Sciences	6.9%
Law	6.5%	Banking, Finance and Related Fields	6.7%
Nursing	6.4%	Electrical and Electronic Engineering	6.2%
Biological Sciences	5.6%	Information Systems	6.0%
Behavioural Science	5.3%	Law	5.9%
Language and Literature	5.1%	Computer Science	5.8%
Curriculum and Education Studies	5.1%	Language and Literature	5.8%
Graphic and Design Studies	4.2%	Economics and Econometrics	5.0%
Biological Sciences	3.7%	Nursing	4.0%

Notes: Excludes 'not elsewhere classified', 'mixed', and 'not further defined' categories. Students can be counted in more than one field. See Section 3 for more details.

Source: http://www.educationcounts.govt.nz/publications/tertiary_education/41801/3

Appendix 2: Guide to the tables

Comparing supply and demand

Estimated number of graduates entering employment from 2002 to 2006

Estimated additional jobs available for people with qualifications in this field of study from 2002 to 2006

Difference in supply over demand from 2002 to 2006

	Supply	*Demand*			*Supply-Demand*	
	Graduates	*Occupational growth*	*Retirement*	*Total*	*No.*	*% of employed*
Diploma	4,910	-600	-170	-770	5,680	82
Bachelors/honours	5,940	3,510	-180	3,330	2,610	19
Masters/doctorate	420	470	30	500	-80	-4

Occupational reference group for diplomas is computer equipment controllers. Occupational reference group for bachelors, masters and doctorates is computing professionals.

List of related occupations used to estimate growth

Estimated additional jobs for people with these qualifications from growth in related occupations

Estimated jobs that need to be filled by people with these qualifications from retirements

Occupational growth + retirements

Total number of supply over demand

Supply over demand as proportion of people employed in 2006 with qualifications in this field of study

References

Callister, P. & Didham, R. (2008). Emerging demographics and socioeconomic features of the Pacific population in New Zealand. In Bisley, A. (ed). (2008). *Pacific Interactions: Pacific in New Zealand: New Zealand in Pacific*. Wellington: Institute of Policy Studies, Victoria University of Wellington.

Cotterell , G., von Randow, M. & Wheldon, M. (2008). *An Examination of the Links between Parental Educational Qualifications, Family Structure and Family Wellbeing, 1981–2006*. Auckland: The University of Auckland.

Foley, K.E. (2005). *Culture and Intergenerational Mobility in Education*. Vancouver: Department of Economics, University of British Columbia.

Hipkins, R., Vaughan, K., Beals, F., Ferral, H., & Gardiner, B. (2005). *Shaping our Futures: Meeting secondary students' learning needs in a time of evolving qualifications*. Wellington: New Zealand Council for Educational Research.

Leach, L. & Zepke, N. (2005). *Student Decision-making by Prospective Tertiary Students, a review of existing New Zealand and overseas literature*. Massey University. Report for the Ministry of Education. Wellington: Ministry of Education. http://www.educationcounts.govt.nz/publications/tertiary_education/5723

Madjar, I., McKinley, E., Jensen, S. & Van Der Merwe, A. (2009). *Towards University: Navigating NCEA course choices in low-mid decile schools*. New Zealand: University of Auckland, Starpath project.

Marshall, J., Baldwin, K. & Peach, R. (2008). *Report on Successful Māori and Pacific PTEs - Te Rau Awhina: The guiding leaf. Good practice examples of Māori and Pacific private training establishments*. Wellington: New Zealand Qualifications Authority.

NZIER, *Pacific Peoples' Economic Participation Report: implications for the New Zealand Economy*, 2006.

Ram SriRamaratnam, Richard Manning, Xintao Zhao (2009), Skills in Demand: Past, Present & Likely in Future, VET Research Forum, Industry Training Federation, Wellington. http://www.itf.org.nz/user/file/541/Session%206LT2%20-%20SriRamaratnam%20etc.pdf.

Scott, D. (2009). A Closer Look at Completion in Higher Education in New Zealand. Wellington: Ministry of Education. Downloaded from http://www.educationcounts.govt.nz/publications/tertiary_education/42059

Smyth, R., Hyatt, J., Nair, B. & Smart, W. (2009). *Does it Really Matter Where You Study?* Wellington: Ministry of Education. Downloaded from http://www.educationcounts.govt.nz/publications/tertiary_education/35968/35970

Tertiary Education Commission. (2008). *Industry Training 2007*. Wellington: Tertiary Education Commission. Downloaded from http://www.tec.govt.nz/upload/downloads/industry-training-report-2007.pdf

Tertiary Education Commission. (2009). *Improving Student Results, Tertiary Education Sector Performance, 2008*. Wellington: Tertiary Education Commission.

Vaughan, K., Roberts, J. & Gardiner, B. (2006). *Young People Producing Careers and Identities*. Wellington: New Zealand Council for Educational Research. Downloaded from http://www.nzcer.org.nz/pdfs/14868.pdf

Wensvoort, M. (2009). *Pasifika Peoples in Tertiary Education*. Wellington: Ministry of Education. Downloaded from http://www.educationcounts.govt.nz/publications/series/2543

Wylie, C., Hodgen, E., Hipkins, R. & Vaughan, K. (2009). *Competent Learners on the Edge of Adulthood: A summary of key findings from the Competent Learners @ 16 project*. Wellington: New Zealand Council for Educational Research.

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