Moving on up

What young people earn after their tertiary education

This report forms part of a series called *Beyond Tertiary Study*.

Topics covered by the series include how graduates’ earnings change over time, labour market outcomes, education and economic growth, and qualifications and income.

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# Summary

This report looks at the outcomes for young people who complete a qualification in the New Zealand tertiary education system. It looks at differences in incomes and employment rates for different types of qualifications. So the information in this report can help young people as they make decisions about what to study.

People take tertiary education for many reasons. They think about what they enjoy, what they are good at, what they capable of and what will get them started on a career. Good careers are associated with better health, better well-being and more satisfying lives. So many young people are making their tertiary education choices to gain the skills they need for satisfying and rewarding work. They use a range of information sources to help them make these choices. The information in this report is designed to add to the data available to young people facing those decisions.

This information is not just important to students and to their families. The Government makes a very large investment in tertiary education each year – funding tertiary education providers, providing subsidised student loans and granting student allowances. One major purpose of the Government’s investment is to help improve the New Zealand economy and society by raising the level of skill in the population – which helps make our society more productive, contributes to the creation of wealth and leads to better social outcomes.

Studying the earnings of graduates is one way of looking at the contribution that the tertiary education system is making to New Zealand’s society and economy. So the information in this report contributes to an understanding of the value New Zealand receives for the investment we make in tertiary education.

|  |
| --- |
| Key findings  Earnings increase with the level of qualification completed. Five years after finishing study, the median earnings of young people who complete a bachelors degree is 53 percent above the national median earnings and 46 percent above the median for young people who gain a certificate at levels 1-3.  Employment rates increase with level of qualification gained. For example, in the first year after study, 56 percent of young bachelors graduates were in employment and 38 percent were in further study. Of young people who had completed a level 1-3 certificate, 37 percent were in employment and 48 percent were taking more study.  Very few young people who complete a qualification at diploma level or above are on a benefit in the first five years after study. The benefit rate is 4 percent for diploma graduates and 2 percent at bachelors level. But it is around 10 percent for those who graduated with certificates at levels 1-3.  Earnings vary considerably by field of study. Young graduates with bachelors degrees in medicine earn the most after studying. The median income for medical graduates is over $110,000 five years after leaving study.  Dental studies and pharmacy bachelors graduates earn the second highest incomes among young bachelors graduates after five years, with median earnings of over $76,100 and $75,100.  Engineering graduates with an honours degree have median earnings of $65,000 five years after study, compared with $58,300 for a bachelors degree without honours.  Bachelors degree graduates in creative arts have the lowest earnings among young bachelors graduates after five years and they have relatively high rates of benefit receipt.  Some qualification types and some fields are associated with high rates of further study. Nearly half of all young people who complete a certificate move into further study the next year. Fifty-eight percent of young bachelors graduates in natural and physical sciences were in further study one year after completion of a bachelors degree, and 32 percent after five years. Other fields with high rates of continuing study include society and culture, health and agriculture, environmental and related studies. |

# The employment outcomes of tertiary education

## Why look at employment outcomes of tertiary education

This report looks at the outcomes for young domestic students who complete a qualification from a New Zealand tertiary education provider – a university, polytechnic, wānanga or a private training establishment.

Looking at outcomes means examining what happens to people after they have left tertiary education to trace the effects of having gained a tertiary education qualification. Examining the outcomes of tertiary education is one of the most important analyses we can do because the real value of tertiary education lies in the extent to which it helps people achieve satisfying lives and productive careers.

People take tertiary education for many reasons. But a very important reason for study among most young people is to start building a career – to gain the skills they need for satisfying and rewarding work. Good careers are associated with better health, better well-being and more satisfying lives. Gaining a tertiary education costs a lot, financially and in time. Young people need to be satisfied that the investment in study is likely to have long-term benefits. So in this report, we look at employment outcomes – whether people get a job after studying and if so, how much they earn.

These analyses are not just important to students and to their families. The Government makes a very large investment in tertiary education each year – funding tertiary education providers, providing subsidised student loans and granting student allowances. A major purpose of the Government’s investment is to help improve the New Zealand economy and society by raising the level of skill in the population – which helps make our society more productive, contributes to the creation of wealth and leads to better social outcomes.

Many economists measure human capital by looking at people’s earnings. The reason is that what an employer pays is an indicator of how much value the worker creates – because the employer cannot pay a person more than the value created by that employee.

So studying the earnings of graduates is a way of looking at the contribution that the tertiary education system is making to New Zealand’s society and economy.

## How we analyse the employment outcomes of tertiary education

We use data from Statistics New Zealand’s Integrated Data Infrastructure (IDI) prototype[[1]](#footnote-1) to look at the outcomes of tertiary education. This dataset is managed by Statistics New Zealand and links together each individual’s tertiary education enrolment and completions data to data on:

* earnings and income (from Inland Revenue)
* welfare benefits (from the Ministry of Social Development)
* border crossings (from Immigration New Zealand)

This dataset is updated periodically so that it is longitudinal – that is, we can trace each person’s progress from year to year in the data.

The IDI is managed under strict confidentiality rules by Statistics New Zealand that guarantee the privacy of the data. These rules protect individual people and businesses from identification.

From the IDI data, we can:

* look at whether a person with a particular educational qualification is in employment, is overseas, has returned to study or is on a benefit
* for those in work, find out how much they are earning
* relate these outcomes to the characteristics of people – gender, ethnicity, age, type of study, student loans and allowances, prior school achievement etc.

In this report, we look at the destinations and earnings of young New Zealand students who complete a tertiary qualification. In this report, we are interested in:

#### Earnings

For those graduates who are in New Zealand and in employment:

* What is their median earnings? What is the range of earnings for the majority of graduates?
* How does a graduate’s earnings change over the first five years post study[[2]](#footnote-2)?

#### Destinations

For graduates who remain in New Zealand:

* What percentage is in further study over the five years after finishing a tertiary qualification?
* What percentage is in employment?
* What percentage is on a benefit?
* What percentage is missing from the labour market?

It is well known that the outcomes of tertiary education depend on the level of the qualification. They are also heavily dependent on the field of study. So in this report, we present data on outcomes, broken down by level and field of study.

## Why is the data in this report so important?

People choose their study plans for many reasons – what they enjoy, what they are good at, what they capable of and what will get them started on a career. They use a range of information sources to help them make the best choices they can. The information in this report is designed to be an additional aid for people facing those decisions.

It is based on factual, comprehensive and up-to-date data on how young people fare in the labour market after they finish tertiary study.

This new data on employment rates and earnings shouldn’t *determine* people’s choices – rather it should be used alongside other sources of information. This data is useful and important, but is best used as a complement to information on Careers New Zealand’s website ([www.careers.govt.nz](http://www.careers.govt.nz)), advice from family members, careers advisors and others and from each individual’s preferences and strengths. We have set out to add to the information available to help people choose – not to replace existing information.

It is also important to recognise that whether a person gets a job and how much he or she earns depend on a range of factors – such as the ability of the person, how well the person presents an application for work – not simply the demand for the skills acquired in education. So not all graduates with a particular level and field of study will get the sort of outcomes set out in the tables in this report.

### Other new sources of information to help young people make choices

The data in this report will also be made available on Careers New Zealand’s website in a tool that helps people make comparisons between the outcomes of particular fields and levels of study. This is available at: [www.careers.govt.nz](http://www.careers.govt.nz). We expect that most people who want to use the data in this report will access it through the Careers New Zealand ‘compare study type’ tool.

Another important source of information that can help people make career and study choices is an occupational outcomes report due for publication by the Ministry of Business, Innovation and Employment in early 2013. This report provides snapshot summaries of the prospects of 40 major occupations. It looks at whether there is likely to be growth in demand in those occupations and it includes data on earnings in each occupation.

## Future work planned in this series

The Ministry of Education plans to do more work on the employment outcomes of tertiary education in the future. We plan to:

* do more detailed destinations analysis, including data on the proportion who leave New Zealand
* do analyses that look at the outcomes for particular groups – for instance, women, Māori and Pasifika
* research the outcomes for people who don’t attend tertiary education
* explore how much of the benefit of tertiary education qualifications is due to the qualification and how much to innate ability of the graduate
* extend the analysis in this report to other forms of tertiary education – especially to industry training.

In addition, the Ministry of Business, Innovation and Employment undertakes research using the IDI data that also explores outcomes. A recent example is the 2012 report by Tas Papadopoulos *Who left, who returned and who was still away?* which uses IDI data to look at the emigration of New Zealand graduates. That report is available at: <http://dol.govt.nz/publication-view.asp?ID=441>.

This report gives data on differences in outcomes between levels and fields of study. We can use a similar method to look at differences between similar qualifications offered at different providers. The Ministry of Education is exploring that possibility now.

## The data and the methodology used in this report

This section gives a short overview of some of the data questions. Chapter 12 sets this information out in much greater detail.

### Outcomes for young graduates

The data in this report gives the earnings and destinations over the first five years after graduates complete a qualification.

We only report the destinations for the people who remain in New Zealand after completing study. You can find out more about those who leave New Zealand by referring to the report *Who left, who returned and who was still away?* published by the Ministry of Business, Innovation and Employment, available at <http://dol.govt.nz/publication-view.asp?ID=441>.

We report the outcomes only for ‘young’ graduates. For each type of qualification, we set an age range that means we are looking only at those who start that qualification and move to completion before undertaking substantial time in the workforce. We restrict the analysis to young graduates because the aim of the analysis is to support the decision-making of young people. If we mixed the outcomes of young graduates with the outcomes for people who undertake tertiary study after substantial work experience, we would be unable to separate the effects of the qualification from the effects of the work experience.

This table shows the age ranges for graduates who meet the criteria for being a ‘young’ graduate.

Table 1

Age ranges for consideration as a ‘young’ graduate

|  |  |  |
| --- | --- | --- |
| Qualification type | Length of qualification – in full-time equivalent years | Highest age on completion to be considered a ‘young’ graduate |
| Doctorate | Four years | 29 |
| Masters | Two years | 27 |
| Level 8 – honours and pg dip or cert | One year | 26 |
| Graduate certificates and diplomas | One year | 26 |
| Bachelors degrees | Three years | 24 |
| Longer than three years | 24 plus 1 for each year beyond three years |
| Diplomas at levels 5-7 | Two years | 23 |
| Certificates at level 4 | One year | 21 |
| Certificates at levels 1-3 | One year | 21 |

Source: Ministry of Education

### Domestic students

We report outcomes and earnings for domestic students only, excluding any international students. We do this because we have no information about the prior qualifications, labour market experience or earnings of international students, so we can be less certain of associating outcomes to New Zealand study experiences for international students.

### Field of study

#### Field of study classification

We use the New Zealand Standard Classification of Education (or NZSCED) to classify people’s study into various fields of study. NZSCED has three levels of classification – broad field of study, narrow field and detailed field.

People graduating in more than one field of study are counted in each of the fields of study. The number of students in each narrow field of study may not sum to the broad field of study total. This is because students can be enrolled in multiple narrow fields of study.

#### Narrow and broad fields of study

Most of our analysis is by broad field of study because if we divide our population of graduates too finely, we end up having to suppress more data because it breaches the Statistics New Zealand confidentiality limits. Chapters 3 to 10 of this report look at earnings by *broad* field of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. The broad field of *natural and physical sciences* contains narrow fields of *mathematical sciences*, *chemical sciences, physics and astronomy, earth sciences* and *biological sciences*. The tables in Chapter 11 of this report and the tables published with this report on the Education Counts website give detail of outcomes by narrow field of study, in fields where there are enough graduates to enable us to report without breaching the Statistics New Zealand confidentiality requirements.

#### How we classify a graduate’s field of study

For each graduate, we look at the range of courses passed and we examine the field of study for each course. We then infer that graduate’s specialisation(s) by looking at the highest level courses done and working out which fields of study represent a ‘substantial’ amount of study. It is important to note that this may not agree with the provider’s understanding of the field(s) of study in which that person specialised. Nor may it agree with the graduate’s understanding. Rather, it reflects what is on that student’s transcript[[3]](#footnote-3).

One consequence of this is that we report on some fields where it is commonly assumed there is only one provider – veterinary studies is an example. It is usually assumed that anyone specialising in that field at bachelors level has done the Bachelor of Veterinary Science degree taught at Massey University. In fact there are three providers whose bachelors graduates are represented in that field. Only the Massey Bachelor of Veterinary Science graduates are recognised as veterinarians. But some graduates at other providers have completed bachelors degrees with a substantial amount of higher level courses in veterinary studies.

### Access to the data

Access to the IDI data used in this study was provided by Statistics New Zealand in accordance with security and confidentiality provisions of the Statistics Act 1975 and secrecy provisions of the Tax Administration Act 1994.

The results presented in this study are the work of the authors, not Statistics New Zealand.

### Confidentialisation

The results in this paper have been confidentialised to protect individuals and businesses from identification. All counts in tables have been randomly rounded to base 3. This may result in a total not agreeing with the sum of individual items shown in the table.

We aggregated data from two cohorts of graduates in order to increase the numbers in the sample and hence, to ensure more data could meet Statistics New Zealand’s confidentiality requirements.

Cells marked ‘C..’ represent numbers suppressed as not meeting Statistics New Zealand’s dataset confidentiality requirements. This includes suppression of blank cells in line with Statistics New Zealand’s confidentiality rules.

### Earnings data

All earnings reported are gross earnings.

Earnings are reported only for graduates for whom we deem work is their main activity, in each year independently post-graduation. See Chapter 12 for more information on how main activity in each year post-study is derived.

### Adjusting the data for changes in national wage rates

The data on earnings is for the tax years ended 31 March 2009-2010. It has been converted to 2011 dollars using the Labour Cost Index. Earnings data shown in this report is otherwise as actually observed in IRD data, and there has been no further adjustment.

### Part-time vs full-time work

IRD employment data does not contain information on the number of hours worked. This means that there will be an understatement of the earnings potential of a field of study if, for example, a substantial proportion of the graduates in that field work on a part-time basis.

### No occupation information

IRD employment data does not contain information on the occupations in which people are employed. We can only show the field of study that graduates studied and readers should note employees may be working in any industry and any occupation, not just those implied by the field of study classification.

### More information on data and methodology

More information about the IDI dataset, how it is managed and the means of protecting privacy and detail on the indicators and measures we have developed are in chapter 12 of this report,

# The employment outcomes of tertiary education

This chapter looks at the destinations and earnings of young domestic students who completed a tertiary education qualification at a provider in New Zealand.

Our analysis confirms well-established facts:

* *Earnings increase with the level of qualification completed.*

Young graduates with bachelors earn more than graduates at certificate and diploma levels*.* Five years after leaving study, the median earnings of young bachelors graduates is $50,900, compared with $39,700 for diplomas and $34,800 for level 1-3 certificates.

* *Five years after leaving study, most young domestic graduates will be earning above the national median earnings*.

Five years after study, half of young people who completed a level 1-3 certificate were earning 4 percent above the national median. For bachelors, median earnings were 53 percent above the national median. And for young masters graduates, the figures was 86 percent above the national median.

* *Among those who remain in New Zealand following completion of their studies, graduate employment rates increase with level of qualification gained.*

In the first year after study, 56 percent of young bachelors graduates are in employment, with 38 percent in further study. For diplomas, the figures are 46 percent in employment and 46 percent in further study. For level 1-3 certificates – many of which focus on preparing people for higher level study – 37 percent are in employment and 48 percent are in further study.

* *Completing a higher level qualification is associated with lower benefit receipt.*

In the first five years after study, less than 2 percent of young bachelors graduates who stay in New Zealand are on a benefit. For level 1-3 certificates, the proportion on a benefit over the first five years is between 9 and 12 percent.

The tables that follow set out:

* the median earnings of young domestic graduates at each qualification level over the first five years following study
* the employment and the further study rate at each qualification level over the first five years following study

They also look at how quickly earnings grow over the first five years following study and they compare the median earnings at each qualification level.

|  |
| --- |
| Figure 1  Median earnings of young domestic completers two and five years after study, by qualification level |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 2

Median and quartile annual earnings of young domestic graduates, one, two and five years after study by qualification level.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Level of study | Measure | Years after study | | |
|  |  | One | Two | Five |
| Doctorate | Upper quartile | $69,061 | $74,675 | $84,262 |
| Median | $56,116 | $64,664 | $73,637 |
| Lower quartile | $35,444 | $50,994 | $58,319 |
| Masters degree | Upper quartile | $55,588 | $60,498 | $75,523 |
| Median | $45,556 | $51,531 | $62,140 |
| Lower quartile | $32,473 | $39,566 | $45,715 |
| Level 8 – bachelors honours/pg dip or cert | Upper quartile | $52,692 | $58,293 | $76,375 |
| Median | $46,198 | $50,376 | $61,066 |
| Lower quartile | $35,484 | $40,014 | $44,914 |
| Graduate certificate or diploma | Upper quartile | $51,383 | $54,842 | $67,535 |
| Median | $46,203 | $48,274 | $57,574 |
| Lower quartile | $39,501 | $41,306 | $42,923 |
| Bachelors degree | Upper quartile | $46,642 | $51,244 | $63,366 |
| Median | $39,701 | $44,474 | $50,938 |
| Lower quartile | $28,543 | $34,311 | $37,576 |
| Diploma | Upper quartile | $36,930 | $40,523 | $50,029 |
| Median | $29,316 | $32,439 | $39,694 |
| Lower quartile | $20,227 | $23,107 | $28,358 |
| Certificate at level 4 | Upper quartile | $32,354 | $35,910 | $43,936 |
| Median | $26,630 | $29,557 | $35,565 |
| Lower quartile | $18,342 | $20,815 | $25,881 |
| Certificate at levels 1-3 | Upper quartile | $31,653 | $35,083 | $44,114 |
| Median | $24,792 | $28,437 | $34,751 |
| Lower quartile | $15,556 | $19,476 | $24,773 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

While we often focus on the median earnings, there is a lot of variation at each level. For instance, the upper quartile of those who complete undergraduate tertiary qualifications is around 25 percent more than the median. A quarter of young bachelors graduates earn less than $37,600, which is 26 percent below the median.

These variations reflect factors such as field of study, industry of employment and occupation. Variation in earnings also reflects individual differences that are not evident in the data – such as motivation and performance on the job.

We look at differences that result from field of study in all the other chapters in this report.

Table 3

Median annual earnings of young domestic, one, two and five years after study, as a percentage of the national median earnings by qualification level.

|  |  |  |  |
| --- | --- | --- | --- |
| Qualification level | Years after study % | | |
| One | Two | Five |
| Doctorate | 168 | 194 | 221 |
| Masters degree | 137 | 155 | 186 |
| Level 8 – bachelors honours, pg dip or cert | 139 | 151 | 183 |
| Graduate certificate or diploma | 139 | 145 | 173 |
| Bachelors degree | 119 | 133 | 153 |
| Diploma at levels 5-7 | 88 | 97 | 119 |
| Certificate at level 4 | 80 | 89 | 107 |
| Certificate at levels 1-3 | 74 | 85 | 104 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 3 shows that:

* More than half of those who complete a qualification at bachelors or higher earn above the national median earnings in their first year out of study
* While the median starting earnings for lower-level qualifications is below the national median, people with those qualifications catch up over time. Five years after completing, more than half those young people who finished a level 1-3 certificate will be earning above the national median.
* People with postgraduate qualifications command high earnings – with half of young doctoral graduates earning more than twice the national median in their fifth year out of study and the median for masters and those who finish level 8 qualifications approaching twice the national median.

Table 4

Growth in median annual earnings of young domestic graduates, over the first five years after study by qualification level.

|  |  |  |  |
| --- | --- | --- | --- |
| Qualification level | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Doctorate | 15 | 31 | 7 |
| Masters degree | 13 | 36 | 8 |
| Level 8 – bachelors honours, pg dip or cert | 9 | 32 | 7 |
| Graduate certificate or diploma | 4 | 25 | 6 |
| Bachelors degree | 12 | 28 | 6 |
| Diploma at levels 5-7 | 11 | 35 | 8 |
| Certificate at level 4 | 11 | 34 | 8 |
| Certificate at levels 1-3 | 15 | 40 | 9 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Young graduates don’t have much work experience. So we expect their earnings to grow quite quickly as they complement what they have learned in study with experience at work. Table 4 shows that earnings rise at a high rate among those who completed a certificate or diploma as they gain experience in work.

Table 5

Median earnings of young domestic graduates at each qualification level, compared with median earnings of young domestic completers of a level 1-3 certificate and compared with the national median earnings, two and five years following study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Qualification level | Compared with a level 1-3 certificate % | | Compared with National Median Earnings 2011 % | |
| Two years after study | Five years after study | Two years after study | Five years after study |
| Doctorate | 227 | 212 | 194 | 221 |
| Masters degree | 181 | 179 | 155 | 186 |
| Level 8– bachelors honours, pg dip or cert | 177 | 176 | 151 | 183 |
| Graduate certificate or diploma | 170 | 166 | 145 | 173 |
| Bachelors degree | 156 | 147 | 133 | 153 |
| Diploma at levels 5-7 | 114 | 114 | 97 | 119 |
| Certificate at level 4 | 104 | 102 | 89 | 107 |
| Certificate at levels 1-3 | 100 | 100 | 85 | 104 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 5 shows that:

* the median earnings of young bachelor graduates is 147 percent of the earnings of those who leave with a level 1-3 certificate five years after leaving study
* the median earnings of those who complete a certificate at level 4 is 102 percent of the median earnings of those who leave with a level 1-3 certificate, five years after study.

Table 6

Proportion of young domestic graduates who were in New Zealand who were in employment and in further study in the first and fifth years after study by qualification level.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Qualification level | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Doctorate | 79 | 11 | 79 | 11 |
| Masters degree | 68 | 24 | 67 | 23 |
| Level 8 qualification – bachelors honours, pg dip or cert | 55 | 40 | 69 | 21 |
| Graduate certificate or diploma | 78 | 17 | 74 | 12 |
| Bachelors degree | 56 | 38 | 70 | 19 |
| Diploma at levels 5-7 | 46 | 46 | 64 | 24 |
| Certificate at level 4 | 40 | 50 | 58 | 28 |
| Certificate at levels 1-3 | 37 | 48 | 53 | 28 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 6 shows that:

* At undergraduate level, employment rates rise with the level of qualification. They also rise over time – a high proportion of young graduates who undertake further study start that in the first year after completion.
* A high proportion of young people who complete certificates go on to further study – reflecting the focus of many certificates in providing preparation for people to undertake study at higher levels.

The remaining chapters in this analysis look at differences in outcomes by qualification level and by field of study.

# Outcomes for young doctoral graduates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a doctoral degree.

### Doctoral degrees

Each year, around 1,000 students complete a doctorate in the New Zealand tertiary education system, about 18 percent of them ‘young’ domestic students, in the way we define that term in this report. These qualifications are mostly taken by people who have already completed a postgraduate degree and who want to extend their qualifications by taking a substantial research project that breaks new ground.

Nearly all doctoral qualifications are completed at universities.

Due to confidentiality requirements, we are only able to report results in this section on natural and physical sciences, society and culture and engineering and related technologies. The fact that only three fields have sufficient graduates is partly because a relatively high proportion of the young people who complete a doctorate in New Zealand come from overseas while many domestic graduates go overseas during their first five years out of study[[4]](#footnote-4). Also, in many fields of study, it is common to undertake a doctorate at an older age.

People with doctoral degrees work in a wide variety of occupations and industries.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all[[5]](#footnote-5) young doctoral graduates was $56,100.[[6]](#footnote-6) This rose by 15 percent in the following year, and by an average of 7 percent a year over the first five years post study, to reach $73,600.
* The median starting salary for young doctoral graduates is 68 percent above the national median earnings for all qualifications for people aged 15-64. Five years post study, the median earnings was more than double the national median.
* The top quarter of young doctoral degree graduates were earning $84,300 or more a year in the fifth year after finishing study, while the lowest quarter earned $58,300 or less.
* Compared with all doctoral graduates, the median earnings of young doctoral graduates in *natural and physical sciences* was lower, while those who took their doctorate in *engineering* had higher median earnings. The top quarter of earners among young doctoral graduates in *natural and physical sciences* earned $81,000 or higher five years post study compared with $84,300 for the top quarter of all doctorate degree completers.
* Earnings of doctoral graduates in *society and culture* showed the greatest variation. While the median and lower quartile were below the corresponding figures for the whole group of young doctoral graduates five years post study – by 8 percent and 30 percent respectively – the upper quartile was higher than the upper quartile for all fields.

### Destinations

* Of the young doctoral completers who were in New Zealand in the first year after study, 79 percent were in employment that year and 11 percent in further study.
* The employment rate in the first year after study for young doctoral graduates in *engineering* was significantly higher at 93 percent. The employment rate for young doctoral graduates in *society and culture* was initially low, as many undertook additional study. But by the third to fifth year post study, the employment rate was much higher at 92 percent.

|  |
| --- |
| Figure 2  Median and upper and lower quartile earnings for young domestic doctoral degree completers in the first five years after study |
| Figure 3  Median earnings of young domestic doctoral degree completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 7

Median and quartile annual earnings of young domestic doctoral degree completers, one, two and five years after study by broad field of study.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
|  |  | One | Two | Five |
| Engineering and related technologies | Upper quartile | $66,630 | $82,375 | C.. |
| Median | $62,773 | $70,232 | $86,596 |
| Lower quartile | $51,916 | $58,131 | C.. |
| Natural and physical sciences | Upper quartile | $67,000 | $68,258 | $81,027 |
| Median | $51,725 | $60,217 | $71,412 |
| Lower quartile | $30,820 | $44,067 | $59,720 |
| Society and culture | Upper quartile | $67,394 | $75,290 | $85,293 |
| Median | $48,349 | $61,965 | $68,037 |
| Lower quartile | $33,542 | $47,176 | $40,948 |
| All | Upper quartile | $69,061 | $74,675 | $84,262 |
| Median | $56,116 | $64,664 | $73,637 |
| Lower quartile | $35,444 | $50,994 | $58,319 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 8

Median annual earnings of young domestic doctoral degree completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Engineering and related technologies | 188 | 211 | 260 |
| Natural and physical sciences | 155 | 181 | 214 |
| Society and culture | 145 | 186 | 204 |
| All | 168 | 194 | 221 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 9

Growth in median annual earnings of young domestic doctoral degree completers, over the first five years after study by broad field of study

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Engineering and related technologies | 12 | 38 | 8 |
| Natural and physical sciences | 16 | 38 | 8 |
| Society and culture | 28 | 41 | 9 |
| All | 15 | 31 | 7 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 10

Proportion of young domestic doctoral degree completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Engineering and related technologies | 93 | 7 | 100 | 25 |
| Natural and physical sciences | 80 | 10 | 79 | 11 |
| Society and culture | 70 | 20 | 92 | 8 |
| All | 79 | 11 | 79 | 11 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Note that the sum across categories can be greater than 100 percent due to rounding to base 3. Refer to Chapter 12 for full notes.

# Outcomes for young masters degree graduates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a masters degree.

### Masters degrees

Each year, around 4,000 students complete a masters degree in the New Zealand tertiary education system, about 28 percent of them ‘young’ domestic students, in the way we define that term in this report. These qualifications are mostly taken by people who have already completed a bachelors degree and who want to extend their qualifications by taking their area of specialisation to a more advanced level. Masters degrees require students to undertake a substantial research project as part of their studies.

The great majority – about 94 percent – of masters qualifications are completed at universities.

Ten of the twelve broad fields of study had enough young completers for us to be able to report on them in this analysis. The two that we don’t report on are:

* Food hospitality and personal services
* Mixed field programmes.

People with masters degrees work in a wide variety of occupations and industries.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field can be found in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young masters graduates was $45,600. This rose by 13 percent in the following year, and by an average of 8 percent a year over the first five years post study, to reach $62,100.
* Five years post study, the median earnings for the young masters graduates was 86 percent above the national median earnings for all qualifications for people aged 15-64.
* The top quarter of young masters degree graduates were earning $75,500 or more a year in the fifth year after finishing study, while the lowest quarter earned $45,700 or less.
* There was some variation in earnings by field of study. The field with the highest median five years after completion of study was *management and commerce* ($72,300). The top quarter of earners among young masters graduates in *management and commerce* earned $90,900 or more while the top quarter of *information technology* young masters degree completers earned $92,900 or more.
* At the other end of the spectrum, holders of a masters degree in *education* had a median of $42,100 five years after leaving study. The fact that the median earnings fell over the five years post study for young masters graduates in *education* appears to result from a move towards part-time employment among the graduates – the lower quartile earnings of $26,000 in year five suggests this. Likewise, the very low lower quartile figure for young masters graduates in *creative arts* may reflect part-time employment.

### Destinations

* Of the young masters graduates who were in New Zealand in the first year after study, 68 percent were in employment that year and 24 percent in further study.
* The broad fields of study with the highest proportion in employment one year after finishing study were *architecture and building* (83 percent) and *information technology* (82 percent). After five years, a high proportion of young masters graduates in *education* were in further study – 40 percent.

|  |
| --- |
| Figure 4  Median and upper and lower quartile earnings for young domestic masters degree graduates in the first five years after study |
| Figure 5  Median earnings of young domestic masters degree graduates two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 11

Median and quartile annual earnings of young domestic masters degree graduates, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
|  |  | One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $52,554 | $57,695 | $71,355 |
| Median | $51,049 | $53,332 | $58,029 |
| Lower quartile | $45,656 | $41,918 | $37,574 |
| Architecture and building | Upper quartile | $56,130 | $60,801 | $76,392 |
| Median | $50,009 | $55,954 | $69,306 |
| Lower quartile | $34,163 | $49,760 | $64,853 |
| Creative arts | Upper quartile | $45,382 | $46,958 | $58,188 |
| Median | $32,563 | $33,538 | $48,710 |
| Lower quartile | $18,153 | $20,539 | $23,633 |
| Education | Upper quartile | C.. | $59,651 | $66,111 |
| Median | $54,608 | $46,816 | $42,149 |
| Lower quartile | C.. | $26,320 | $26,041 |
| Engineering and related technologies | Upper quartile | $61,603 | $67,655 | $87,608 |
| Median | $53,402 | $57,963 | $71,201 |
| Lower quartile | $44,846 | $51,648 | $61,083 |
| Health | Upper quartile | $58,226 | $62,185 | $71,117 |
| Median | $45,387 | $50,707 | $53,655 |
| Lower quartile | $42,703 | $42,986 | $42,952 |
| Information technology | Upper quartile | $55,944 | $64,891 | $92,861 |
| Median | $47,366 | $55,755 | $71,944 |
| Lower quartile | $36,759 | $49,835 | $59,495 |
| Management and commerce | Upper quartile | $58,170 | $65,634 | $90,861 |
| Median | $46,609 | $52,699 | $72,312 |
| Lower quartile | $31,742 | $42,500 | $50,867 |
| Natural and physical sciences | Upper quartile | $50,640 | $55,576 | $68,875 |
| Median | $42,035 | $48,948 | $57,424 |
| Lower quartile | $30,699 | $40,494 | $46,349 |
| Society and culture | Upper quartile | $54,030 | $58,835 | $73,901 |
| Median | $43,311 | $49,754 | $59,543 |
| Lower quartile | $29,335 | $36,599 | $40,774 |
| Total students | Upper quartile | $55,588 | $60,498 | $75,523 |
| Median | $45,556 | $51,531 | $62,140 |
| Lower quartile | $32,473 | $39,566 | $45,715 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 12

Median annual earnings of young domestic masters degree graduates, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 153 | 160 | 174 |
| Architecture and building | 150 | 168 | 208 |
| Creative arts | 98 | 101 | 146 |
| Education | 164 | 140 | 126 |
| Engineering and related technologies | 160 | 174 | 214 |
| Health | 136 | 152 | 161 |
| Information technology | 142 | 167 | 216 |
| Management and commerce | 140 | 158 | 217 |
| Natural and physical sciences | 126 | 147 | 172 |
| Society and culture | 130 | 149 | 179 |
| Total students | 137 | 155 | 186 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 13

Growth in median annual earnings of young domestic masters degree graduates, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 4 | 14 | 3 |
| Architecture and building | 12 | 39 | 9 |
| Creative arts | 3 | 50 | 11 |
| Education | -14 | -23 | -6 |
| Engineering and related technologies | 9 | 33 | 7 |
| Health | 12 | 18 | 4 |
| Information technology | 18 | 52 | 11 |
| Management and commerce | 13 | 55 | 12 |
| Natural and physical sciences | 16 | 37 | 8 |
| Society and culture | 15 | 37 | 8 |
| Total students | 13 | 36 | 8 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 14

Proportion of young domestic masters degree graduates who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 78 | 11 | 76 | 24 |
| Architecture and building | 83 | 11 | 64 | 27 |
| Creative arts | 70 | 16 | 69 | 15 |
| Education | 42 | 50 | 40 | 40 |
| Engineering and related technologies | 75 | 15 | 79 | 12 |
| Health | 72 | 21 | 61 | 32 |
| Information technology | 82 | 18 | 80 | 7 |
| Management and commerce | 71 | 17 | 70 | 15 |
| Natural and physical sciences | 62 | 27 | 60 | 32 |
| Society and culture | 60 | 31 | 68 | 23 |
| Total students | 68 | 24 | 67 | 23 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young people who complete honours degrees and postgraduate diplomas and certificates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a qualification at level 8 on the New Zealand Qualifications Framework – a bachelors honours degree or a postgraduate certificate or diploma.

### Level 8 qualifications

Each year, between 9,000 and 10,000 students complete a level 8 qualification in the New Zealand tertiary education system, about 35 percent of them ‘young’ domestic students, in the way we define that term in this report. These qualifications are mostly taken by people who have already completed a bachelors degree and who want to extend their qualifications by taking their area of specialisation to a more advanced level.

The majority – about 88 percent – of level 8 qualifications are completed at universities, with about 6 percent completed at polytechnics and 6 percent at private training establishments.

Ten of the twelve broad fields of study had enough young completers for us to be able to report on them in this report. The two that we don’t report on are

* Food hospitality and personal services
* Mixed field programmes.

People with level 8 qualifications work in a wide variety of occupations and industries.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field can be found in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young graduates with a level 8 qualification was $46,200. This rose by 9 percent in the following year, and by an average of 7 percent a year over the first five years post study, to reach $61,000.
* Five years post study, the median earnings for the young level 8 graduates was 83 percent above the national median earnings for people aged 15-64 for all qualifications.
* The top quarter of young graduates with a level 8 qualification were earning $76,400 or more a year in the fifth year after finishing study, while the lowest quarter earned $44,900 or less.
* There was some variation in earnings by field of study. The field with the highest median five years after completion of study was *information technology* ($71,300). The top quarter of earners among young holders of a level 8 qualification in *information technology* earned $86,100 or more. The top quarter of young level 8 graduates in *health* earned $88,300.
* At the other end of the scale, holders of a level 8 qualification in *creative arts* had a median of $41,100 five years after leaving study, with the top quarter of graduates earning above $53,000. We are not in a position to account in detail for why this field has earnings lower than any other field. However, it is likely that many people taking study at this level in creative arts are motivated by their interests in practising the arts, despite the fact that the industry doesn’t pay well. It is likely that many of those in the lowest quartile of earners are working part time.

### Destinations

* Of the young level 8 qualification holders who were in New Zealand in the first year after study, 55 percent were in employment that year and 40 percent in further study.
* The high proportion in further study reflects the fact that many people use an honours degree as a route to a research qualification, such as a masters degree or a doctorate. More than half the young level 8 graduates in *agriculture, environmental and related studies* and two-thirds of those in *natural and physical sciences* were in further study in the first year following completion – these two are fields where progression from an honours degree to higher study is very common.
* Five years after finishing study, 69 percent of the young level 8 qualification holders who were in New Zealand were in employment and 21 percent in further study.

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| Figure 6  Median and upper and lower quartile earnings for young domestic level 8 qualification completers in the first five years after study |
| Figure 7  Median earnings of young domestic level 8 qualification completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 15

Median and quartile annual earnings of young domestic level 8 qualification completers, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
|  |  | One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $52,644 | $54,908 | $65,856 |
| Median | $41,351 | $49,544 | $51,937 |
| Lower quartile | $32,310 | $37,771 | $39,764 |
| Architecture and building | Upper quartile | C.. | C.. | $69,151 |
| Median | $52,746 | C.. | $60,944 |
| Lower quartile | C.. | C.. | $49,934 |
| Creative arts | Upper quartile | $38,567 | $42,388 | $52,951 |
| Median | $28,730 | $35,183 | $41,062 |
| Lower quartile | $18,453 | $21,373 | $23,424 |
| Education | Upper quartile | $47,772 | $53,200 | $60,586 |
| Median | $44,473 | $47,377 | $54,712 |
| Lower quartile | $33,924 | $38,413 | $42,651 |
| Engineering and related technologies | Upper quartile | $53,181 | $59,173 | $73,841 |
| Median | $49,183 | $53,755 | $65,029 |
| Lower quartile | $44,356 | $46,656 | $53,256 |
| Health | Upper quartile | $67,436 | $69,210 | $88,332 |
| Median | $53,606 | $53,864 | $64,410 |
| Lower quartile | $41,790 | $42,810 | $47,806 |
| Information technology | Upper quartile | $52,482 | $60,311 | $86,124 |
| Median | $48,787 | $52,305 | $71,294 |
| Lower quartile | $40,901 | $43,438 | $54,996 |
| Management and commerce | Upper quartile | $50,054 | $57,902 | $81,040 |
| Median | $44,280 | $48,886 | $64,384 |
| Lower quartile | $37,087 | $40,482 | $48,814 |
| Natural and physical sciences | Upper quartile | $47,939 | $53,440 | $66,039 |
| Median | $38,491 | $45,561 | $53,113 |
| Lower quartile | $28,896 | $35,551 | $41,355 |
| Society and culture | Upper quartile | $50,271 | $57,431 | $78,587 |
| Median | $42,635 | $48,503 | $60,832 |
| Lower quartile | $31,809 | $37,795 | $44,358 |
| Total students | Upper quartile | $52,692 | $58,293 | $76,375 |
| Median | $46,198 | $50,376 | $61,066 |
| Lower quartile | $35,484 | $40,014 | $44,914 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 16

Median annual earnings of young domestic level 8 qualification completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 124 | 149 | 156 |
| Architecture and building | 158 | C.. | 183 |
| Creative arts | 86 | 106 | 123 |
| Education | 133 | 142 | 164 |
| Engineering and related technologies | 148 | 161 | 195 |
| Health | 161 | 162 | 193 |
| Information technology | 146 | 157 | 214 |
| Management and commerce | 133 | 147 | 193 |
| Natural and physical sciences | 116 | 137 | 159 |
| Society and culture | 128 | 146 | 183 |
| Total students | 139 | 151 | 183 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 17

Growth in median annual earnings of young domestic level 8 qualification completers, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 20 | 26 | 6 |
| Architecture and building | C.. | 16 | 4 |
| Creative arts | 22 | 43 | 9 |
| Education | 7 | 23 | 5 |
| Engineering and related technologies | 9 | 32 | 7 |
| Health | 0 | 20 | 5 |
| Information technology | 7 | 46 | 10 |
| Management and commerce | 10 | 45 | 10 |
| Natural and physical sciences | 18 | 38 | 8 |
| Society and culture | 14 | 43 | 9 |
| Total students | 9 | 32 | 7 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 18

Proportion of young domestic level 8 qualification completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 41 | 54 | 70 | 18 |
| Architecture and building | 44 | 44 | 69 | 15 |
| Creative arts | 48 | 44 | 69 | 25 |
| Education | 57 | 38 | 67 | 21 |
| Engineering and related technologies | 63 | 30 | 70 | 18 |
| Health | 55 | 42 | 63 | 27 |
| Information technology | 54 | 40 | 73 | 15 |
| Management and commerce | 61 | 35 | 78 | 12 |
| Natural and physical sciences | 29 | 67 | 58 | 32 |
| Society and culture | 55 | 40 | 69 | 21 |
| Total students | 55 | 40 | 69 | 21 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young people who complete graduate diplomas and certificates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a graduate certificate or diploma.

### Graduate certificates and diplomas

Each year, between 4,000 and 5,000 students complete a graduate certificate or diploma in the New Zealand tertiary education system, about 32 percent of them ‘young’ domestic students, in the way we define that term in this report. Graduate certificates and diplomas are mostly taken by people who have already completed a bachelors degree and who want to broaden their qualifications – essentially, adding an additional area of specialisation to their qualifications.

The majority of graduate certificates and diplomas are completed at universities, with between 14 and 17 percent completed at polytechnics and 15-16 percent at private training establishments.

Graduate certificates and diplomas include courses at level 7 – which is the same as the final year level of most bachelors degrees. Only eight of the twelve broad fields of study had enough young completers for us to be able to report on them in this report. The four that we don’t report on are

* Architecture and building
* Engineering and related technologies
* Food hospitality and personal services
* Mixed field programmes.

People with graduate certificates and diplomas work in a wide variety of occupations and industries.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field can be found in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young graduates with a graduate certificate or diploma was $46,200. This rose by 4 percent in the following year, and by an average of 6 percent a year over the first five years post study, to reach $57,600.
* Five years post study, the median earnings for the young graduate certificate or diploma completers was 73 percent above the national median earnings for all ages and qualifications.
* The top quarter of young holders of a graduate certificate or diploma were earning $67,500 or more a year in the fifth year after finishing study, while the lowest quarter earned $43,000 or less.
* There was some variation in earnings by field of study. The fields with the highest median five years after completion of study was *society and culture* and *information technology* where, in each case, the median was between $65,000 and $66,000. The top quarter of earners among young holders of a graduate certificate or diploma in *society and culture* was $93,300, with the upper quartile in *management and commerce* being $75,800.
* At the other end of the spectrum, young holders of a graduate certificate or diploma in *creative arts* had a median of $45,600 five years after leaving study, with the top quarter of graduates earning above $58,800.

### Destinations

* Of the young graduate certificate or diploma holders who were in New Zealand in the first year after study, 78 percent were in employment that year and 17 percent in further study, reflecting that people use level 7 graduate certificates and diplomas as way to steer bachelors level work towards a vocation.

|  |
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| Figure 8  Median and upper and lower quartile earnings for young domestic graduate certificate and diploma completers in the first five years after study |
| Figure 9  Median earnings of young domestic graduate certificate and diploma completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 19

Median and quartile annual earnings of young domestic graduate certificate and diploma completers, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
|  |  | One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | C.. | C.. | C.. |
| Median | $29,304 | $49,726 | C.. |
| Lower quartile | C.. | C.. | C.. |
| Creative arts | Upper quartile | $39,504 | $44,500 | $58,796 |
| Median | $35,175 | $38,456 | $45,586 |
| Lower quartile | $27,548 | $30,516 | $31,008 |
| Education | Upper quartile | $48,270 | $50,644 | $64,143 |
| Median | $46,203 | $48,068 | $57,327 |
| Lower quartile | $41,262 | $43,342 | $43,048 |
| Health | Upper quartile | $60,733 | $61,172 | $69,805 |
| Median | $53,758 | $54,477 | $57,519 |
| Lower quartile | $43,354 | $37,674 | $43,326 |
| Information technology | Upper quartile | $43,761 | $54,752 | $73,168 |
| Median | $38,777 | $43,576 | $65,480 |
| Lower quartile | $28,961 | $28,614 | $41,921 |
| Management and commerce | Upper quartile | $48,716 | $56,229 | $75,841 |
| Median | $43,606 | $48,656 | $60,456 |
| Lower quartile | $37,315 | $42,177 | $45,710 |
| Natural and physical sciences | Upper quartile | $49,775 | C.. | C.. |
| Median | $42,899 | $50,759 | $48,556 |
| Lower quartile | $36,217 | C.. | C.. |
| Society and culture | Upper quartile | $57,676 | $71,585 | $93,290 |
| Median | $53,476 | $57,675 | $65,841 |
| Lower quartile | $44,124 | $44,216 | $48,686 |
| Total students | Upper quartile | $51,383 | $54,842 | $67,535 |
| Median | $46,203 | $48,274 | $57,574 |
| Lower quartile | $39,501 | $41,306 | $42,923 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 20

Median annual earnings of young domestic graduate certificate and diploma completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 88 | 149 | C.. |
| Creative arts | 106 | 115 | 137 |
| Education | 139 | 144 | 172 |
| Health | 161 | 163 | 173 |
| Information technology | 116 | 131 | 197 |
| Management and commerce | 131 | 146 | 181 |
| Natural and physical sciences | 129 | 152 | 146 |
| Society and culture | 160 | 173 | 198 |
| Total students | 139 | 145 | 173 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 21

Growth in median annual earnings of young domestic graduate certificate and diploma completers, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 70 | C.. | C.. |
| Creative arts | 9 | 30 | 7 |
| Education | 4 | 24 | 6 |
| Health | 1 | 7 | 2 |
| Information technology | 12 | 69 | 14 |
| Management and commerce | 12 | 39 | 9 |
| Natural and physical sciences | 18 | 13 | 3 |
| Society and culture | 8 | 23 | 5 |
| Total students | 4 | 25 | 6 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 22

Proportion of young domestic graduate certificate and diploma completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | C.. | C.. | 67 | 8 |
| Creative arts | 67 | 24 | 77 | 14 |
| Education | 86 | 11 | 75 | 50 |
| Health | 64 | 36 | 77 | 15 |
| Information technology | 61 | 28 | 68 | 9 |
| Management and commerce | 73 | 20 | 77 | 8 |
| Natural and physical sciences | 45 | 45 | 50 | 25 |
| Society and culture | 75 | 18 | 72 | 12 |
| Total students | 78 | 17 | 74 | 12 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young bachelors degree graduates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a bachelors degree.

### Bachelors degrees

Each year, around 24,000 students complete a bachelors degree in the New Zealand tertiary education system, about 54 percent of them ‘young’ domestic students, in the way we define that term in this report. Study for a bachelors degree is the most common destination for school leavers who have met the university entrance requirement. Of those who leave school with NCEA level 3, around 70 percent will enter study for a bachelors degree the following year.

The majority of bachelors graduates complete their qualifications at universities, with between 15 and 18 percent completed at polytechnics, 3 percent at wānanga and 4 percent at private training establishments.

Bachelors degrees require graduates to have a field of specialisation with a set of courses at level 7 in that field. Bachelors degrees are offered in most of the broad fields of study – the only broad fields with insufficient young graduates for us to report on in this paper are:

* Food hospitality and personal services
* Mixed field programmes.

People with a bachelors degree work in a wide variety of occupations and industries.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes for young bachelors graduates by narrow field can be found in Chapter 11 of this report and in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young graduates with a bachelors degree was $39,700. This rose by 12 percent in the following year, and by an average of 6.4 percent a year over the first five years post study, to reach $50,900.
* Five years post study, the median earnings for the young graduates was 53 percent above the national median earnings for all ages and qualifications.
* The top quarter of young domestic bachelors graduates were earning $63,400 or more a year, while the lowest quarter earned $37,600 or less.
* There was substantial variation in earnings by field of study. The three fields with the highest medians five years after completion of study were *health* ($62,600), *engineering* ($58,300) and *information technology* ($57,000). The top quarter of earners among graduates in those fields earned more than $86,100, $70,000 and $71,200 respectively.
* At the other end of the spectrum, *creative arts* bachelors graduates had a median of $42,600 five years after leaving study, with the top quarter of graduates earning above $53,400.

### Destinations

* Of the bachelors graduates who were in New Zealand in the first year after study, 56 percent were in employment that year and 38 percent in further study.
* Five years after finishing study, 70 percent of the young bachelors graduates who were in New Zealand were in employment and 19 percent in further study.
* The broad field of study with the highest proportion in further study one year after finishing study was *natural and physical of sciences* with 58 percent, while the figure for *society and culture* was 52 percent. After five years, the proportions in further study in these fields were 32 percent and 22 percent respectively.
* The high proportion in further study reflects the fact that many young people move from a bachelors degree to higher level study – an honours degree or other level 8 qualification, or a masters degree. Mostly – but not always – this occurs in the year after completing the bachelors degree.

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| Figure 10  Median and upper and lower quartile earnings for young domestic bachelors graduates in the first five years after study |
| Figure 11  Median earnings of young domestic bachelors graduates two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 23

Median and quartile annual earnings of young domestic bachelors degree graduates, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
| One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $48,063 | $53,197 | $61,559 |
| Median | $38,613 | $44,728 | $49,157 |
| Lower quartile | $28,148 | $33,036 | $37,224 |
| Architecture and building | Upper quartile | $46,399 | $50,047 | $62,245 |
| Median | $38,806 | $42,458 | $50,597 |
| Lower quartile | $28,826 | $35,153 | $39,377 |
| Creative arts | Upper quartile | $37,489 | $43,792 | $53,398 |
| Median | $29,843 | $35,908 | $42,575 |
| Lower quartile | $19,900 | $24,846 | $28,800 |
| Education | Upper quartile | $46,749 | $48,205 | $56,280 |
| Median | $44,590 | $45,815 | $49,804 |
| Lower quartile | $38,885 | $41,011 | $36,155 |
| Engineering and related technologies | Upper quartile | $49,830 | $53,878 | $69,975 |
| Median | $43,124 | $46,287 | $58,287 |
| Lower quartile | $33,273 | $37,422 | $46,716 |
| Health | Upper quartile | $61,356 | $67,318 | $86,149 |
| Median | $47,132 | $52,602 | $62,647 |
| Lower quartile | $39,993 | $42,449 | $43,104 |
| Information technology | Upper quartile | $47,373 | $53,772 | $71,232 |
| Median | $41,310 | $47,124 | $56,958 |
| Lower quartile | $31,288 | $37,445 | $44,331 |
| Management and commerce | Upper quartile | $45,690 | $51,670 | $68,014 |
| Median | $39,838 | $44,741 | $53,791 |
| Lower quartile | $31,061 | $36,891 | $41,373 |
| Natural and physical sciences | Upper quartile | $44,662 | $51,320 | $61,004 |
| Median | $36,874 | $44,137 | $50,897 |
| Lower quartile | $26,153 | $34,394 | $39,267 |
| Society and culture | Upper quartile | $44,488 | $49,730 | $59,961 |
| Median | $36,660 | $43,074 | $48,974 |
| Lower quartile | $24,629 | $32,349 | $36,212 |
| Total students | Upper quartile | $46,642 | $51,244 | $63,366 |
| Median | $39,701 | $44,474 | $50,938 |
| Lower quartile | $28,543 | $34,311 | $37,576 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 24

Median annual earnings of young domestic bachelors degree graduates, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 116 | 134 | 148 |
| Architecture and building | 116 | 127 | 152 |
| Creative arts | 90 | 108 | 128 |
| Education | 134 | 137 | 149 |
| Engineering and related technologies | 129 | 139 | 175 |
| Health | 141 | 158 | 188 |
| Information technology | 124 | 141 | 171 |
| Management and commerce | 120 | 134 | 161 |
| Natural and physical sciences | 111 | 132 | 153 |
| Society and culture | 110 | 129 | 147 |
| Total students | 119 | 133 | 153 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 25

Growth in median annual earnings of young domestic bachelors degree graduates, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 16 | 27 | 6 |
| Architecture and building | 9 | 30 | 7 |
| Creative arts | 20 | 43 | 9 |
| Education | 3 | 12 | 3 |
| Engineering and related technologies | 7 | 35 | 8 |
| Health | 12 | 33 | 7 |
| Information technology | 14 | 38 | 8 |
| Management and commerce | 12 | 35 | 8 |
| Natural and physical sciences | 20 | 38 | 8 |
| Society and culture | 17 | 34 | 8 |
| Total students | 12 | 28 | 6 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 26

Proportion of young domestic bachelors degree graduates who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 53 | 43 | 70 | 21 |
| Architecture and building | 58 | 32 | 79 | 9 |
| Creative arts | 64 | 27 | 71 | 15 |
| Education | 79 | 18 | 78 | 13 |
| Engineering and related technologies | 52 | 43 | 75 | 17 |
| Health | 68 | 29 | 70 | 21 |
| Information technology | 67 | 23 | 77 | 13 |
| Management and commerce | 62 | 32 | 76 | 12 |
| Natural and physical sciences | 36 | 58 | 59 | 32 |
| Society and culture | 43 | 52 | 67 | 22 |
| Total students | 56 | 38 | 70 | 19 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young diploma completers

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a diploma at level 5, 6 or 7.

### Diplomas

Each year, around 19,000 to 23,000 students complete a diploma in the New Zealand tertiary education system, about 20 percent of them ‘young’ domestic students, in the way we define that term in this report. Around one in ten recent school leavers entering tertiary education for the first time in 2011 undertook study for a diploma. The most common school leaving qualification of that group was NCEA level 2 and over 80 percent had achieved NCEA 2 or higher before leaving school.

The greatest number of diplomas is completed at polytechnics and private training establishments – these two subsectors account for between 80 and 85 percent of all the diploma completions, with around 7 percent completed at wānanga and a similar number at universities.

Diplomas are vocational qualifications that aim to give people practical skills needed in the workforce. Diplomas are offered in all of the broad fields of study – there were no broad fields with insufficient young completers for us to report on in this paper.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field can be found in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young diploma completers was $29,300. This rose by 11 percent in the following year, and by an average of 7.9 percent a year over the first five years post study, to reach $39,700.
* Five years post study, the median earnings for the young diploma holders was 19 percent above the national median earnings for all ages and qualifications.
* The top quarter of young, domestic diploma holders were earning $50,000 or more a year five years post study, while the lowest quarter earned $28,400 or less.
* There was variation in earnings by field of study. The field with the highest median five years after completion of study was *engineering* ($48,600). The top quarter of earners among engineering diploma holders earned $61,000 or more five years after leaving study.
* At the other end of the scale, *mixed field programme* diploma graduates had a median of $28,300 five years after leaving study, with *food, hospitality and personal services* diploma holders having median earnings of $34,900.

### Destinations

* Of the diploma holders who were in New Zealand in the first year after study, 46 percent were in employment that year and 46 percent in further study.
* Five years after finishing study, 64 percent of the young diploma graduates who were in New Zealand were in employment and 24 percent in further study.
* The broad field of study with the highest proportion in further study one year after finishing study was *natural and physical sciences* with 62 percent. After five years, the proportion in further study in that field was 21 percent.

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| Figure 12  Median and upper and lower quartile earnings for young domestic diploma completers in the first five years after study |
| Figure 13  Median earnings of young domestic diploma completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 27

Median and quartile annual earnings of young domestic diploma completers, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
| One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $38,761 | $43,769 | $51,317 |
| Median | $34,248 | $35,371 | $43,048 |
| Lower quartile | $27,381 | $29,153 | $30,911 |
| Architecture and building | Upper quartile | $40,371 | $43,827 | $55,486 |
| Median | $33,626 | $35,926 | $45,031 |
| Lower quartile | $29,400 | $29,913 | $35,985 |
| Creative arts | Upper quartile | $34,082 | $37,374 | $46,441 |
| Median | $26,756 | $30,306 | $36,472 |
| Lower quartile | $17,433 | $20,894 | $25,464 |
| Education | Upper quartile | $48,197 | $49,609 | $54,700 |
| Median | $42,954 | $41,579 | $44,300 |
| Lower quartile | $32,953 | $30,655 | $30,528 |
| Engineering and related technologies | Upper quartile | $47,242 | $51,032 | $60,948 |
| Median | $36,990 | $40,658 | $48,568 |
| Lower quartile | $27,129 | $33,103 | $37,422 |
| Food, hospitality and personal services | Upper quartile | $31,853 | $35,042 | $42,103 |
| Median | $25,952 | $29,487 | $34,937 |
| Lower quartile | $18,840 | $21,244 | $24,802 |
| Health | Upper quartile | $34,785 | $37,612 | $45,752 |
| Median | $27,739 | $30,884 | $36,369 |
| Lower quartile | $19,297 | $20,942 | $26,854 |
| Information technology | Upper quartile | $38,271 | $42,418 | $56,434 |
| Median | $29,798 | $34,293 | $43,943 |
| Lower quartile | $20,136 | $25,892 | $33,445 |
| Management and commerce | Upper quartile | $38,083 | $43,516 | $51,364 |
| Median | $31,573 | $35,498 | $42,010 |
| Lower quartile | $24,310 | $26,870 | $31,197 |
| Mixed field programmes | Upper quartile | C.. | C.. | C.. |
| Median | $31,412 | C.. | $28,343 |
| Lower quartile | C.. | C.. | C.. |
| Natural and physical sciences | Upper quartile | $36,916 | $36,660 | $48,979 |
| Median | $29,513 | $31,152 | $40,402 |
| Lower quartile | $19,350 | $15,382 | $26,511 |
| Society and culture | Upper quartile | $33,749 | $39,382 | $47,804 |
| Median | $25,467 | $28,153 | $37,234 |
| Lower quartile | $16,094 | $18,017 | $25,535 |
| Total students | Upper quartile | $36,930 | $40,523 | $50,029 |
| Median | $29,316 | $32,439 | $39,694 |
| Lower quartile | $20,227 | $23,107 | $28,358 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 28

Median annual earnings of young domestic diploma completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 103 | 106 | 129 |
| Architecture and building | 101 | 108 | 135 |
| Creative arts | 80 | 91 | 109 |
| Education | 129 | 125 | 133 |
| Engineering and related technologies | 111 | 122 | 146 |
| Food, hospitality and personal services | 78 | 88 | 105 |
| Health | 83 | 93 | 109 |
| Information technology | 89 | 103 | 132 |
| Management and commerce | 95 | 107 | 126 |
| Mixed field programmes | 94 | C.. | 85 |
| Natural and physical sciences | 89 | 93 | 121 |
| Society and culture | 76 | 84 | 112 |
| Total students | 88 | 97 | 119 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 29

Growth in median annual earnings of young domestic diploma completers, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 3 | 26 | 6 |
| Architecture and building | 7 | 34 | 8 |
| Creative arts | 13 | 36 | 8 |
| Education | -3 | 3 | 1 |
| Engineering and related technologies | 10 | 31 | 7 |
| Food, hospitality and personal services | 14 | 35 | 8 |
| Health | 11 | 31 | 7 |
| Information technology | 15 | 47 | 10 |
| Management and commerce | 12 | 33 | 7 |
| Mixed field programmes | C.. | -10 | -3 |
| Natural and physical sciences | 6 | 37 | 8 |
| Society and culture | 11 | 46 | 10 |
| Total students | 11 | 35 | 8 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 30

Proportion of young domestic diploma completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 60 | 35 | 69 | 21 |
| Architecture and building | 66 | 30 | 66 | 23 |
| Creative arts | 45 | 46 | 63 | 23 |
| Education | 45 | 52 | 70 | 20 |
| Engineering and related technologies | 54 | 42 | 68 | 22 |
| Food, hospitality and personal services | 68 | 23 | 61 | 21 |
| Health | 48 | 46 | 63 | 27 |
| Information technology | 40 | 48 | 68 | 21 |
| Management and commerce | 45 | 47 | 69 | 20 |
| Mixed field programmes | C.. | C.. | 57 | 29 |
| Natural and physical sciences | 35 | 62 | 63 | 21 |
| Society and culture | 33 | 60 | 53 | 34 |
| Total students | 46 | 46 | 64 | 24 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young level 4 certificate completers

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a certificate at level 4 on the New Zealand Qualifications Framework.

### Level 4 certificates

Each year, around 25,000 students complete a level 4 certificate in the New Zealand tertiary education system, about 20 percent of them ‘young’ domestic students, in the way we define that term in this report. Around one in eight recent school leavers entering tertiary education for the first time in 2011 undertook study for a level 4 certificate. Nearly half that group achieved NCEA level 2 before leaving school and around two-thirds had achieved NCEA at level 2 or 3.

The greatest number of level 4 certificates is completed at polytechnics, wānanga and private training establishments.

Level 4 certificates are mostly vocational qualifications that aim to give people practical skills needed in the workforce. They are offered in all of the broad fields of study.

It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field can be found in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young domestic level 4 certificate completers was $26,600. This rose by 11 percent in the following year, and by an average of 7.5 percent a year over the first five years post study, to reach $35,600.
* Five years post study, the median earnings for the young level 4 certificate holders was 7 percent above the national median earnings for all ages and qualifications.
* The top quarter of young domestic level 4 certificate completers were earning $43,900 or more a year five years post study, while the lowest quarter earned $25,900 or less.
* There was variation in earnings by field of study. The field with the highest median five years after completion of study was *education* ($39,800). The top quarter of earners among education diploma holders earned $46,200 five years after leaving study.
* At the other end of the spectrum, *creative arts* young certificate level 4 holders had median earnings of $32,600 five years after leaving study, with *food, hospitality and personal services* young level 4 certificate holders having median earnings of $33,100.

### Destinations

* Of the young certificate level 4 holders who were in New Zealand in the first year after study, 40 percent were in employment that year and 50 percent in further study.
* Five years after finishing study, 58 percent of the young certificate level 4 holders who were in New Zealand were in employment and 28 percent in further study.
* The broad field of study with the highest proportion in further study one year after finishing study was *mixed field programmes* with 89 percent. After five years, the proportion in further study in that field was 47 percent.
* The high proportion of those who took *mixed field programmes* who returned to study after completion is a reflection of the orientation of many mixed field certificates – which are intended to provide a pathway to higher levels of study.

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| Figure 14  Median and upper and lower quartile earnings for young domestic level 4 certificate completers in the first five years after study |
| Figure 15  Median earnings of young domestic level 4 certificate completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 31

Median and quartile annual earnings of young domestic level 4 certificate completers, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
| One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $33,957 | $37,627 | $43,176 |
| Median | $26,450 | $30,021 | $34,167 |
| Lower quartile | $17,678 | $18,823 | $22,222 |
| Architecture and building | Upper quartile | $32,833 | $36,224 | $46,828 |
| Median | $28,277 | $30,766 | $39,277 |
| Lower quartile | $20,950 | $23,896 | $31,154 |
| Creative arts | Upper quartile | $29,789 | $34,349 | $40,844 |
| Median | $22,445 | $27,819 | $32,564 |
| Lower quartile | $13,389 | $17,666 | $24,048 |
| Education | Upper quartile | $32,569 | $36,568 | $46,241 |
| Median | $24,320 | $24,739 | $39,786 |
| Lower quartile | $13,731 | $14,558 | $25,637 |
| Engineering and related technologies | Upper quartile | $33,792 | $41,465 | $46,368 |
| Median | $28,014 | $32,122 | $38,768 |
| Lower quartile | $19,468 | $25,123 | $25,979 |
| Food, hospitality and personal services | Upper quartile | $31,274 | $33,879 | $40,399 |
| Median | $26,063 | $27,654 | $33,113 |
| Lower quartile | $17,247 | $19,763 | $23,224 |
| Health | Upper quartile | $32,740 | $36,691 | $44,688 |
| Median | $26,702 | $30,768 | $35,338 |
| Lower quartile | $16,604 | $21,229 | $24,171 |
| Information technology | Upper quartile | $33,208 | $37,307 | $46,876 |
| Median | $27,720 | $30,898 | $37,353 |
| Lower quartile | $19,952 | $21,262 | $30,489 |
| Management and commerce | Upper quartile | $32,587 | $36,578 | $44,881 |
| Median | $27,689 | $30,531 | $37,727 |
| Lower quartile | $20,914 | $23,831 | $29,537 |
| Mixed field programmes | Upper quartile | $28,729 | $34,611 | $43,900 |
| Median | $21,473 | $27,399 | $34,519 |
| Lower quartile | $14,376 | $19,944 | $24,701 |
| Natural and physical sciences | Upper quartile | $27,674 | $34,474 | $42,996 |
| Median | $23,299 | $29,234 | $35,566 |
| Lower quartile | $15,612 | $16,459 | $23,390 |
| Society and culture | Upper quartile | $29,816 | $33,765 | $41,786 |
| Median | $21,081 | $25,975 | $34,122 |
| Lower quartile | $13,550 | $15,194 | $22,712 |
| Total students | Upper quartile | $32,354 | $35,910 | $43,936 |
| Median | $26,630 | $29,557 | $35,565 |
| Lower quartile | $18,342 | $20,815 | $25,881 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 32

Median annual earnings of young domestic level 4 certificate completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 79 | 90 | 103 |
| Architecture and building | 85 | 92 | 118 |
| Creative arts | 67 | 83 | 98 |
| Education | 73 | 74 | 119 |
| Engineering and related technologies | 84 | 96 | 116 |
| Food, hospitality and personal services | 78 | 83 | 99 |
| Health | 80 | 92 | 106 |
| Information technology | 83 | 93 | 112 |
| Management and commerce | 83 | 92 | 113 |
| Mixed field programmes | 64 | 82 | 104 |
| Natural and physical sciences | 70 | 88 | 107 |
| Society and culture | 63 | 78 | 102 |
| Total students | 80 | 89 | 107 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 33

Growth in median annual earnings of young domestic level 4 certificate completers, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 14 | 29 | 7 |
| Architecture and building | 9 | 39 | 9 |
| Creative arts | 24 | 45 | 10 |
| Education | 2 | 64 | 13 |
| Engineering and related technologies | 15 | 38 | 8 |
| Food, hospitality and personal services | 6 | 27 | 6 |
| Health | 15 | 32 | 7 |
| Information technology | 11 | 35 | 8 |
| Management and commerce | 10 | 36 | 8 |
| Mixed field programmes | 28 | 61 | 13 |
| Natural and physical sciences | 25 | 53 | 11 |
| Society and culture | 23 | 62 | 13 |
| Total students | 11 | 34 | 8 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 34

Proportion of young domestic level 4 certificate completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 46 | 29 | 67 | 20 |
| Architecture and building | 65 | 25 | 78 | 14 |
| Creative arts | 21 | 71 | 57 | 29 |
| Education | 25 | 73 | 48 | 35 |
| Engineering and related technologies | 55 | 32 | 60 | 24 |
| Food, hospitality and personal services | 56 | 32 | 61 | 19 |
| Health | 28 | 66 | 52 | 37 |
| Information technology | 33 | 60 | 59 | 27 |
| Management and commerce | 54 | 35 | 62 | 23 |
| Mixed field programmes | 8 | 89 | 45 | 47 |
| Natural and physical sciences | 10 | 88 | 42 | 47 |
| Society and culture | 20 | 73 | 49 | 34 |
| Total students | 40 | 50 | 58 | 28 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Outcomes for young people who complete level 1-3 certificates

## Introduction

This chapter looks at the destinations and earnings of young domestic students who graduated from providers in New Zealand with a certificate at levels 1, 2 or 3 on the New Zealand Qualifications Framework.

### Level 1-3 certificates

Each year, around 48,000 students complete a level 1-3 certificate in the New Zealand tertiary education system, about 19 percent of them ‘young’ domestic students, in the way we define that term in this report. Around one in six recent school leavers entering tertiary education for the first time in 2011 undertook study for a level 1-3 certificate at a tertiary education provider[[7]](#footnote-7). Around half had left school with NCEA level 1 or lower, while about 40 percent had achieved NCEA at level 2.

Around a half of level 1-3 certificates is completed at polytechnics with wānanga and private training establishments accounting for the rest in roughly equal proportions.

While some level 1-3 certificates are vocational qualifications that aim to give people practical skills needed in the workforce, many are foundation qualifications whose purpose is to provide basic and generic skills that can be used in work or as the basis of further, higher level study.

Level 1-3 certificates are offered in most of the broad fields of study – there were no broad fields with insufficient young completers for us to report on in this paper. It is important to bear in mind, when reading the analysis below, that we are looking at *broad* fields of study. There are differences between narrow fields of study that are not apparent when we look at data on broad field. Data on outcomes by narrow field for level 1-3 certificate completers can be found in Chapter 11 of this report and in the tables published on the Education Counts website.

## What we found

### Earnings

* In the first year after study, the median earnings in 2011 dollars of all young domestic level 1-3 certificate completers was $24,800. This rose by 15 percent in the following year, and by an average of 9 percent a year over the first five years post study, to reach $34,800.
* Five years post study, the median earnings for the young certificate 1-3 completers was 4 percent above the national median earnings for all ages and qualifications.
* The top quarter of young certificate 1-3 completers were earning $44,100 or more a year, while the lowest quarter earned $24,800 or less.
* There was variation in earnings by field of study. The field with the highest median five years after completion of study was *natural and physical sciences* ($43,400). The top quarter of earners among *natural and physical sciences* young certificate 1-3 completers earned $51,600 five years after leaving study.
* At the other end of the scale, *food, hospitality and personal services* young certificate 1-3 completers had median earnings of $31,100 five years after leaving study, and *mixed field programs* and *society and culture* certificate holders had median earnings of $32,600 and $32,900 respectively.

### Destinations

* Of the young certificate 1-3 completers who were in New Zealand in the first year after study, 37 percent were in employment that year and 48 percent in further study.
* Five years after finishing study, 53 percent of the young certificate 1-3 completers who were in New Zealand were in employment and 28 percent in further study.
* The broad field of study with the highest proportion in further study one year after finishing study was *information technology* with 61 percent. After five years, the proportion in further study in that field was 32 percent.
* Many level 1-3 certificates are intended to provide a pathway to higher level study. This orientation is reflected in the high proportions in further study.

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| Figure 16  Median and upper and lower quartile earnings for young domestic level 1-3 certificate completers in the first five years after study |
| Figure 17  Median earnings of young domestic level 1-3 certificate completers two and five years after study |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 35

Median and quartile annual earnings of young domestic level 1-3 certificate completers, one, two and five years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | Measure | Years after study | | |
| One | Two | Five |
| Agriculture, environmental and related studies | Upper quartile | $33,954 | $39,017 | $45,033 |
| Median | $25,543 | $31,496 | $35,111 |
| Lower quartile | $13,216 | $22,644 | $25,901 |
| Architecture and building | Upper quartile | $31,488 | $35,219 | $47,949 |
| Median | $25,964 | $28,154 | $37,660 |
| Lower quartile | $18,172 | $20,017 | $30,176 |
| Creative arts | Upper quartile | $29,866 | $33,725 | $40,902 |
| Median | $23,480 | $27,618 | $33,611 |
| Lower quartile | $15,055 | $18,780 | $22,944 |
| Education | Upper quartile | $30,646 | $35,468 | $49,132 |
| Median | $22,391 | $22,512 | $37,768 |
| Lower quartile | $13,428 | $13,164 | $22,970 |
| Engineering and related technologies | Upper quartile | $33,961 | $38,196 | $49,195 |
| Median | $27,655 | $31,029 | $39,621 |
| Lower quartile | $18,841 | $23,872 | $29,409 |
| Food, hospitality and personal services | Upper quartile | $27,750 | $31,058 | $38,938 |
| Median | $21,413 | $25,422 | $31,116 |
| Lower quartile | $14,505 | $17,670 | $22,136 |
| Health | Upper quartile | $35,135 | $36,021 | $46,411 |
| Median | $26,460 | $29,107 | $36,890 |
| Lower quartile | $17,736 | $18,675 | $26,479 |
| Information technology | Upper quartile | $30,058 | $33,670 | $44,993 |
| Median | $23,951 | $25,564 | $34,483 |
| Lower quartile | $15,389 | $16,117 | $26,327 |
| Management and commerce | Upper quartile | $31,621 | $35,354 | $43,416 |
| Median | $26,275 | $29,605 | $34,983 |
| Lower quartile | $18,342 | $21,588 | $25,943 |
| Mixed field programmes | Upper quartile | $28,910 | $31,695 | $41,763 |
| Median | $19,358 | $23,027 | $32,562 |
| Lower quartile | $10,312 | $14,796 | $20,470 |
| Natural and physical sciences | Upper quartile | $29,462 | $34,955 | $51,566 |
| Median | $24,824 | $27,844 | $43,370 |
| Lower quartile | $15,260 | $15,306 | $32,297 |
| Society and culture | Upper quartile | $28,698 | $32,476 | $42,517 |
| Median | $19,943 | $23,969 | $32,903 |
| Lower quartile | $12,061 | $15,018 | $21,156 |
| Total students | Upper quartile | $31,653 | $35,083 | $44,114 |
| Median | $24,792 | $28,437 | $34,751 |
| Lower quartile | $15,556 | $19,476 | $24,773 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

The median value is the half way point in the ranking of earnings – so half the people earn above the median and half earn below the median.

The upper quartile is the value that is a quarter of the way from top to bottom in the ranking of earnings – so a quarter of the people earn above the upper quartile and three quarters earn below the upper quartile.

The lower quartile is the value that is three quarters of the way from top to bottom in the ranking of earnings – so a quarter of the people earn below the lower quartile and three quarters earn above the lower quartile.

Table 36

Median annual earnings of young domestic level 1-3 certificate completers, one, two and five years after study, as a percentage of the national median earnings by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Years after study % | | |
| One | Two | Five |
| Agriculture, environmental and related studies | 77 | 95 | 105 |
| Architecture and building | 78 | 84 | 113 |
| Creative arts | 70 | 83 | 101 |
| Education | 67 | 68 | 113 |
| Engineering and related technologies | 83 | 93 | 119 |
| Food, hospitality and personal services | 64 | 76 | 93 |
| Health | 79 | 87 | 111 |
| Information technology | 72 | 77 | 103 |
| Management and commerce | 79 | 89 | 105 |
| Mixed field programmes | 58 | 69 | 98 |
| Natural and physical sciences | 74 | 84 | 130 |
| Society and culture | 60 | 72 | 99 |
| Total students | 74 | 85 | 104 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 37

Growth in median annual earnings of young domestic level 1-3 certificate completers, over the first five years after study by broad field of study,

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | | |
| Over the first year | Over the first five years | Average annual growth over the first five years |
| Agriculture, environmental and related studies | 23 | 37 | 8 |
| Architecture and building | 8 | 45 | 10 |
| Creative arts | 18 | 43 | 9 |
| Education | 1 | 69 | 14 |
| Engineering and related technologies | 12 | 43 | 9 |
| Food, hospitality and personal services | 19 | 45 | 10 |
| Health | 10 | 39 | 9 |
| Information technology | 7 | 44 | 10 |
| Management and commerce | 13 | 33 | 7 |
| Mixed field programmes | 19 | 68 | 14 |
| Natural and physical sciences | 12 | 75 | 15 |
| Society and culture | 20 | 65 | 13 |
| Total students | 15 | 40 | 9 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 38

Proportion of young domestic level 1-3 certificate completers who were in New Zealand who were in employment and in further study in the first and fifth years after study by broad field of study,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field of study | One year after study % | | Five years after study % | |
| In employment | In further study | In employment | In further study |
| Agriculture, environmental and related studies | 45 | 41 | 60 | 23 |
| Architecture and building | 41 | 47 | 65 | 23 |
| Creative arts | 34 | 55 | 56 | 30 |
| Education | C.. | C.. | 51 | 29 |
| Engineering and related technologies | 39 | 52 | 60 | 29 |
| Food, hospitality and personal services | 36 | 47 | 57 | 22 |
| Health | 39 | 49 | 59 | 26 |
| Information technology | 18 | 61 | 43 | 32 |
| Management and commerce | 39 | 44 | 52 | 28 |
| Mixed field programmes | 21 | 53 | 36 | 33 |
| Natural and physical sciences | C.. | C.. | 51 | 37 |
| Society and culture | 32 | 53 | 48 | 32 |
| Total students | 37 | 48 | 53 | 28 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# A focus on outcomes by narrow field of study

## Looking at narrow fields of study

Chapters 3 to 10 of this report present the outcomes for young graduates by broad field of study. A limitation of that approach is that some broad fields are very diverse and include quite different areas of study that may have quite different outcomes.

For instance, the broad field of *health* contains narrow fields of *medicine, nursing, pharmacy* and *rehabilitation therapies*. The main qualifications for medicine and nursing are bachelors degrees. But to qualify in medicine takes six years of full-time study, while nursing is a three-year degree. The salaries paid to newly qualified doctors are higher than those of newly qualified nurses. And the pathway into study for nursing is different to the pathway to medicine.

The broad field of *society and culture* contains narrow fields of *law, economics* and *sport and recreation*. These three narrow fields have quite different outcomes and require different preparation before study.

When we present the analysis by broad field of study, we are averaging out these differences in outcomes. Some people have particular strengths or interests in one narrow field but not another – for instance, a person who is keen to study sports but doesn’t have an interest in or the preparatory subjects for economics. So it’s useful to look at outcomes by narrow field.

But there are limitations to reporting narrow field outcome information. When we divide up a broad field, we get smaller numbers of young domestic graduates in each narrow field. Sometimes the numbers are too few to give meaningful information; or it may be possible to uncover the person or provider that information belongs to. It is essential we guard against the risk of revealing private information,

In this chapter we present outcomes data by narrow field of study for young domestic graduates who have completed bachelors degrees and level 1-3 certificates – the two biggest levels of study for school leavers who enter a tertiary education provider. Data on outcomes by narrow field in other levels of study is available on the Ministry of Education’s Education Counts website [www.educationccounts.govt.nz](http://www.educationccounts.govt.nz) and through the Careers New Zealand website at: [www.careers.govt.nz](http://www.careers.govt.nz).

## Outcomes by narrow field for bachelors graduates

### Earnings

* Young bachelors completers in *medical studies* earned the most five years post study, at $110,000. These were followed by *dental studies* ($76,100), *pharmacy* ($75,100) and *veterinary studies* ($74,200). These figures were 330 percent, 228 percent, 225 percent and 223 percent of the national median earnings in 2010 respectively.
* At the other end of the spectrum, *performing arts,* *other creative arts* and *visual arts and crafts* young bachelors graduates had the lowest median earnings – $35,600, $37,300 and $38,100 five years after leaving study respectively.
* Young *pharmacy* bachelors graduates had the highest wage growth over the first five years, averaging 16 percent each year after study. Pharmacy graduates’ median earnings was relatively low in the first year post study, but by 60 percent in the first year after graduation. *Dental studies* graduates had the lowest growth (1 percent a year over the first five years) reflecting high median earnings one year after study ($73,900).
* Some broad fields had wider variation between narrow fields than others. Comparing wages earned five years after study, *health* varied the most. Five years after study, the median earnings in the highest narrow field in health (*medical studies* at nearly $110,000) was more than double the lowest (rehabilitation therapies where the median was less than $47,500).
* The differences in *management and commerce* and *society and culture* were also large. In *society and culture*, graduates in *economics* earned 35 percent above those in *justice and law enforcement*. In *management and commerce*, the narrow field *other management and commerce* had median earnings over 35 percent above the median for *tourism* graduates.
* The least variable were *education*, *agriculture, environmental and related studies* and *engineering and related technologies*.

### Destinations

* There were high employment rates in the first year after study for *pharmacy* (93 percent), *medical studies* and *radiography* (85 percent) and teacher education (84 percent) young bachelors completers.
* Five years after finishing study, 88 percent of *other information technology* and *civil engineering* young bachelors completers who were in New Zealand were in employment, followed by *horticulture and viticulture* (82), *architecture and urban environment* and *teacher education* (79 percent) graduates.
* High levels of further study five years after leaving are indicated for young bachelors graduates in *biological sciences* (36 percent), *chemical sciences* (35 percent), *other natural and physical sciences (34 percent), physics and astronomy (31 percent) and philosophy and religious studies* (30 percent).

Table 39

Median earnings for young domestic bachelors graduates, one two and five years after study, by narrow field of study

| **Broad field of study** | **Narrow field of study** | **One** | **Two** | **Five** |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | $36,874 | $44,137 | $50,897 |
| Mathematical Sciences | $42,200 | $45,996 | $53,624 |
| Physics and Astronomy | $42,605 | $45,847 | $53,747 |
| Chemical Sciences | $37,522 | $43,706 | $45,135 |
| Earth Sciences | $36,614 | $46,013 | $52,597 |
| Biological Sciences | $32,525 | $40,143 | $48,421 |
| Other Natural and Physical Sciences | $40,425 | $49,274 | $57,645 |
| Information Technology | Total | $41,310 | $47,124 | $56,958 |
| Computer Science | $41,168 | $47,643 | $55,869 |
| Information Systems | $41,260 | $46,802 | $57,601 |
| Other Information Technology | $44,097 | $48,723 | $63,422 |
| Engineering and Related Technologies | Total | $43,124 | $46,287 | $58,287 |
| Manufacturing, Engineering and Technology | C.. | $51,931 | $60,235 |
| Process and Resources Engineering | $39,834 | $38,103 | $55,393 |
| Mechanical and Industrial Engineering and Technology | $41,256 | $43,019 | $60,373 |
| Civil Engineering | $47,315 | $52,284 | $67,653 |
| Geomatic Engineering | $45,626 | $47,544 | $53,353 |
| Electrical and Electronic Engineering and Technology | $41,961 | $46,329 | $61,379 |
| Architecture and Building | Total | $38,806 | $42,458 | $50,597 |
| Architecture and Urban Environment | $38,005 | $42,303 | $49,413 |
| Building | $43,474 | $43,925 | $57,860 |
| Agriculture, Environmental and Related Studies | Total | $38,613 | $44,728 | $49,157 |
| Agriculture | $40,250 | $45,343 | $48,822 |
| Horticulture and Viticulture | $37,613 | $38,036 | $48,295 |
| Forestry Studies | $46,070 | $48,950 | $50,742 |
| Environmental Studies | $36,087 | $48,915 | $50,719 |
| Health | Total | $47,132 | $52,602 | $62,647 |
| Medical Studies | $90,312 | $94,257 | $109,977 |
| Nursing | $46,155 | $50,632 | $55,158 |
| Pharmacy | $41,268 | $66,177 | $75,124 |
| Dental Studies | $73,900 | $68,083 | $76,083 |
| Veterinary Studies | $56,279 | $58,851 | $74,166 |
| Public Health | $40,830 | $48,652 | $61,545 |
| Radiography | $53,457 | $59,553 | $71,370 |
| Rehabilitation Therapies | $44,812 | $48,247 | $47,516 |
| Other Health | $31,041 | $38,567 | $48,555 |
| Education | Total | $44,590 | $45,815 | $49,804 |
| Teacher Education | $44,760 | $45,840 | $49,923 |
| Curriculum and Education Studies | $44,253 | $46,255 | $48,628 |
| Management and Commerce | Total | $39,838 | $44,741 | $53,791 |
| Accountancy | $43,183 | $46,935 | $60,473 |
| Business and Management | $39,433 | $44,745 | $52,675 |
| Sales and Marketing | $38,334 | $43,153 | $51,416 |
| Tourism | $34,818 | $39,569 | $46,956 |
| Banking, Finance and Related Fields | $42,118 | $46,942 | $58,774 |
| Other Management and Commerce | $40,955 | $44,766 | $63,613 |
| Society and Culture | Total | $36,660 | $43,074 | $48,974 |
| Political Science and Policy Studies | $36,258 | $42,235 | $48,896 |
| Studies in Human Society | $34,866 | $40,741 | $47,271 |
| Human Welfare Studies and Services | $42,174 | $45,988 | $49,026 |
| Behavioural Science | $34,124 | $40,867 | $48,553 |
| Law | $43,927 | $48,830 | $56,894 |
| Justice and Law Enforcement | $35,691 | $41,271 | $42,839 |
| Language and Literature | $31,775 | $39,299 | $45,703 |
| Philosophy and Religious Studies | $34,376 | $38,707 | $45,894 |
| Economics and Econometrics | $40,466 | $47,142 | $57,785 |
| Sport and Recreation | $29,723 | $38,402 | $45,676 |
| Other Society and Culture | $31,570 | $39,405 | $47,001 |
| Creative Arts | Total | $29,843 | $35,908 | $42,575 |
| Performing Arts | $22,650 | $29,477 | $35,552 |
| Visual Arts and Crafts | $25,935 | $30,903 | $38,117 |
| Graphic and Design Studies | $29,820 | $35,857 | $42,795 |
| Communication and Media Studies | $34,300 | $39,118 | $48,481 |
| Other Creative Arts | $25,420 | $30,688 | $37,263 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 40

Median earnings of young domestic bachelors graduates, one, two and five years after study, as a percentage of the national median earnings by narrow field of study,

| **Broad field of study** | **Narrow field of study** | **One %** | **Two %** | **Five %** |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | 111 | 132 | 153 |
| Mathematical Sciences | 127 | 138 | 161 |
| Physics and Astronomy | 128 | 138 | 161 |
| Chemical Sciences | 113 | 131 | 135 |
| Earth Sciences | 110 | 138 | 158 |
| Biological Sciences | 98 | 120 | 145 |
| Other Natural and Physical Sciences | 121 | 148 | 173 |
| Information Technology | Total | 124 | 141 | 171 |
| Computer Science | 124 | 143 | 168 |
| Information Systems | 124 | 140 | 173 |
| Other Information Technology | 132 | 146 | 190 |
| Engineering and Related Technologies | Total | 129 | 139 | 175 |
| Manufacturing, Engineering and Technology | C.. | 156 | 181 |
| Process and Resources Engineering | 120 | 114 | 166 |
| Mechanical and Industrial Engineering and Technology | 124 | 129 | 181 |
| Civil Engineering | 142 | 157 | 203 |
| Geomatic Engineering | 137 | 143 | 160 |
| Electrical and Electronic Engineering and Technology | 126 | 139 | 184 |
| Architecture and Building | Total | 116 | 127 | 152 |
| Architecture and Urban Environment | 114 | 127 | 148 |
| Building | 130 | 132 | 174 |
| Agriculture, Environmental and Related Studies | Total | 116 | 134 | 148 |
| Agriculture | 121 | 136 | 147 |
| Horticulture and Viticulture | 113 | 114 | 145 |
| Forestry Studies | 138 | 147 | 152 |
| Environmental Studies | 108 | 147 | 152 |
| Health | Total | 141 | 158 | 188 |
| Medical Studies | 271 | 283 | 330 |
| Nursing | 139 | 152 | 166 |
| Pharmacy | 124 | 199 | 225 |
| Dental Studies | 222 | 204 | 228 |
| Veterinary Studies | 169 | 177 | 223 |
| Public Health | 123 | 146 | 185 |
| Radiography | 160 | 179 | 214 |
| Rehabilitation Therapies | 134 | 145 | 143 |
| Other Health | 93 | 116 | 146 |
| Education | Total | 134 | 137 | 149 |
| Teacher Education | 134 | 138 | 150 |
| Curriculum and Education Studies | 133 | 139 | 146 |
| Management and Commerce | Total | 120 | 134 | 161 |
| Accountancy | 130 | 141 | 181 |
| Business and Management | 118 | 134 | 158 |
| Sales and Marketing | 115 | 130 | 154 |
| Tourism | 104 | 119 | 141 |
| Banking, Finance and Related Fields | 126 | 141 | 176 |
| Other Management and Commerce | 123 | 134 | 191 |
| Society and Culture | Total | 110 | 129 | 147 |
| Political Science and Policy Studies | 109 | 127 | 147 |
| Studies in Human Society | 105 | 122 | 142 |
| Human Welfare Studies and Services | 127 | 138 | 147 |
| Behavioural Science | 102 | 123 | 146 |
| Law | 132 | 147 | 171 |
| Justice and Law Enforcement | 107 | 124 | 129 |
| Language and Literature | 95 | 118 | 137 |
| Philosophy and Religious Studies | 103 | 116 | 138 |
| Economics and Econometrics | 121 | 141 | 173 |
| Sport and Recreation | 89 | 115 | 137 |
| Other Society and Culture | 95 | 118 | 141 |
| Creative Arts | Total | 90 | 108 | 128 |
| Performing Arts | 68 | 88 | 107 |
| Visual Arts and Crafts | 78 | 93 | 114 |
| Graphic and Design Studies | 89 | 108 | 128 |
| Communication and Media Studies | 103 | 117 | 145 |
| Other Creative Arts | 76 | 92 | 112 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 41

Growth in median annual earnings of young domestic bachelors graduates, over the first five years after study by narrow field

| **Broad field of study** | **Narrow field of study** | After one year % | After five years % | Average per year % |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | 20 | 38 | 8 |
| Mathematical Sciences | 9 | 27 | 6 |
| Physics and Astronomy | 8 | 26 | 6 |
| Chemical Sciences | 16 | 20 | 5 |
| Earth Sciences | 26 | 44 | 9 |
| Biological Sciences | 23 | 49 | 10 |
| Other Natural and Physical Sciences | 22 | 43 | 9 |
| Information Technology | Total | 14 | 38 | 8 |
| Computer Science | 16 | 36 | 8 |
| Information Systems | 13 | 40 | 9 |
| Other Information Technology | 10 | 44 | 10 |
| Engineering and Related Technologies | Total | 7 | 35 | 8 |
| Process and Resources Engineering | -4 | 39 | 9 |
| Mechanical and Industrial Engineering and Technology | 4 | 46 | 10 |
| Civil Engineering | 11 | 43 | 9 |
| Geomatic Engineering | 4 | 17 | 4 |
| Electrical and Electronic Engineering and Technology | 10 | 46 | 10 |
| Architecture and Building | Total | 9 | 30 | 7 |
| Architecture and Urban Environment | 11 | 30 | 7 |
| Building | 1 | 33 | 7 |
| Agriculture, Environmental and Related Studies | Total | 16 | 27 | 6 |
| Agriculture | 13 | 21 | 5 |
| Horticulture and Viticulture | 1 | 28 | 6 |
| Forestry Studies | 6 | 10 | 2 |
| Environmental Studies | 36 | 41 | 9 |
| Health | Total | 12 | 33 | 7 |
| Medical Studies | 4 | 22 | 5 |
| Nursing | 10 | 20 | 5 |
| Pharmacy | 60 | 82 | 16 |
| Dental Studies | -8 | 3 | 1 |
| Veterinary Studies | 5 | 32 | 7 |
| Public Health | 19 | 51 | 11 |
| Radiography | 11 | 34 | 7 |
| Rehabilitation Therapies | 8 | 6 | 1 |
| Other Health | 24 | 56 | 12 |
| Education | Total | 3 | 12 | 3 |
| Teacher Education | 2 | 12 | 3 |
| Curriculum and Education Studies | 5 | 10 | 2 |
| Management and Commerce | Total | 12 | 35 | 8 |
| Accountancy | 9 | 40 | 9 |
| Business and Management | 13 | 34 | 8 |
| Sales and Marketing | 13 | 34 | 8 |
| Tourism | 14 | 35 | 8 |
| Banking, Finance and Related Fields | 11 | 40 | 9 |
| Other Management and Commerce | 9 | 55 | 12 |
| Society and Culture | Total | 17 | 34 | 8 |
| Political Science and Policy Studies | 16 | 35 | 8 |
| Studies in Human Society | 17 | 36 | 8 |
| Human Welfare Studies and Services | 9 | 16 | 4 |
| Behavioural Science | 20 | 42 | 9 |
| Law | 11 | 30 | 7 |
| Justice and Law Enforcement | 16 | 20 | 5 |
| Language and Literature | 24 | 44 | 10 |
| Philosophy and Religious Studies | 13 | 34 | 7 |
| Economics and Econometrics | 16 | 43 | 9 |
| Sport and Recreation | 29 | 54 | 11 |
| Other Society and Culture | 25 | 49 | 10 |
| Creative Arts | Total | 20 | 43 | 9 |
| Performing Arts | 30 | 57 | 12 |
| Visual Arts and Crafts | 19 | 47 | 10 |
| Graphic and Design Studies | 20 | 44 | 9 |
| Communication and Media Studies | 14 | 41 | 9 |
| Other Creative Arts | 21 | 47 | 10 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 42

Destinations by narrow field of study for young domestic bachelors graduates who remain in New Zealand

|  |  | Employment % | | | Further Study % | | | Benefit % | | | Other % | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Broad field of study** | **Narrow field of study** | One | **Two** | **Five** | One | Two | Five | One | **Two** | **Five** | One | **Two** | **Five** |
| Natural and physical sciences | Total | 36 | 44 | 59 | 58 | 50 | 32 | 1 | 1 | 2 | 4 | 4 | 8 |
| Mathematical Sciences | 36 | 53 | 60 | 57 | 42 | 27 | 1 | C.. | 1 | 5 | 4 | 11 |
| Physics and Astronomy | 25 | 34 | 55 | 70 | 60 | 31 | 3 | C.. | 3 | 5 | 3 | 7 |
| Chemical Sciences | 26 | 37 | 56 | 69 | 56 | 35 | 2 | 2 | 2 | 3 | 4 | 7 |
| Earth Sciences | 35 | 47 | 67 | 56 | 47 | 24 | 1 | 1 | 2 | 7 | 4 | 8 |
| Biological Sciences | 31 | 38 | 55 | 64 | 58 | 36 | 1 | 1 | 2 | 4 | 4 | 8 |
| Other Natural and Physical Sciences | 59 | 58 | 59 | 37 | 37 | 34 | 1 | 1 | 1 | 3 | 5 | 6 |
| Information technology | Total | 67 | 75 | 77 | 23 | 17 | 13 | 3 | 1 | 1 | 7 | 6 | 9 |
| Computer Science | 62 | 74 | 74 | 27 | 17 | 14 | 4 | 1 | 1 | 8 | 7 | 10 |
| Information Systems | 72 | 75 | 77 | 20 | 18 | 13 | 3 | 2 | 1 | 7 | 5 | 8 |
| Other Information Technology | 78 | 82 | 88 | 11 | 7 | 12 | 4 | 4 | 0 | 7 | 7 | C.. |
| Engineering and related technologies | Total | 52 | 58 | 75 | 43 | 37 | 17 | 2 | 1 | 1 | 2 | 4 | 7 |
| Manufacturing, Engineering and Technology | C.. | C.. | 68 | C.. | C.. | C.. | C.. | C.. | 5 | C.. | C.. | 14 |
| Process and Resources Engineering | 29 | 44 | 63 | 65 | 50 | 25 | C.. | C.. | 0 | C.. | C.. | 13 |
| Mechanical and Industrial Engineering and Technology | 40 | 36 | 72 | 56 | 59 | 17 | C.. | 0 | 6 | C.. | C.. | C.. |
| Civil Engineering | 62 | 71 | 88 | 31 | 21 | C.. | 0 | 0 | 0 | 0 | 7 | 13 |
| Geomatic Engineering | 62 | 63 | 70 | 37 | 30 | 17 | C.. | C.. | 0 | 1 | 7 | 9 |
| Electrical and Electronic Engineering and Technology | 52 | 60 | 73 | 42 | 38 | 18 | 4 | C.. | 2 | 4 | 4 | 8 |
| Other Engineering and Related Technologies | 40 | 67 | 90 | 40 | 33 | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| Architecture and building | Total | 58 | 62 | 79 | 32 | 31 | 9 | 3 | 1 | 4 | 7 | 5 | 9 |
| Architecture and Urban Environment | 56 | 61 | 79 | 33 | 32 | 7 | 3 | 1 | 4 | 8 | 5 | 10 |
| Building | 69 | 70 | 73 | 28 | 30 | 20 | C.. | 0 | C.. | 3 | 0 | C.. |
| Agriculture, environmental and related studies | Total | 53 | 54 | 70 | 43 | 40 | 21 | 1 | 0 | 2 | 3 | 5 | 8 |
| Agriculture | 56 | 57 | 70 | 41 | 37 | 20 | 0 | C.. | C.. | 2 | 4 | 8 |
| Horticulture and Viticulture | 50 | 62 | 82 | 38 | 31 | 18 | C.. | 0 | C.. | 6 | 8 | C.. |
| Forestry Studies | C.. | 38 | 50 | C.. | 50 | C.. | C.. | 0 | 0 | C.. | C.. | 17 |
| Environmental Studies | 46 | 50 | 64 | 54 | 46 | 25 | 0 | C.. | 4 | 4 | 7 | 7 |
| Health | Total | 68 | 67 | 70 | 29 | 29 | 21 | 1 | 0 | 1 | 2 | 4 | 8 |
| Medical Studies | 85 | 66 | 76 | 12 | 29 | 19 | 0 | 0 | C.. | 3 | 4 | 4 |
| Nursing | 46 | 62 | 72 | 52 | 35 | 20 | 1 | 1 | 1 | 1 | 3 | 8 |
| Pharmacy | 93 | 85 | 67 | 4 | 13 | 20 | 0 | 0 | C.. | 2 | 4 | 11 |
| Veterinary Studies | C.. | C.. | 63 | C.. | C.. | 22 | C.. | C.. | 0 | C.. | C.. | 15 |
| Public Health | 40 | 43 | 63 | 60 | 54 | C.. | 3 | 0 | 0 | 7 | 4 | 25 |
| Radiography | 85 | 78 | 76 | 15 | 20 | 20 | 0 | 0 | 0 | C.. | 3 | 8 |
| Rehabilitation Therapies | 84 | 76 | 65 | 15 | 21 | 24 | C.. | 0 | 1 | 2 | 3 | 11 |
| Other Health | 48 | 51 | 65 | 47 | 44 | 27 | 1 | C.. | 1 | 3 | 5 | 8 |
| Education | Total | 79 | 81 | 78 | 18 | 15 | 13 | 1 | 1 | 1 | 2 | 3 | 7 |
| Teacher Education | 84 | 85 | 79 | 13 | 12 | 13 | 1 | 1 | 1 | 2 | 2 | 7 |
| Curriculum and Education Studies | 65 | 73 | 75 | 32 | 21 | 16 | 1 | 1 | 1 | 3 | 4 | 8 |
| Management and commerce | Total | 62 | 71 | 76 | 32 | 21 | 12 | 1 | 1 | 1 | 5 | 7 | 11 |
| Accountancy | 50 | 71 | 80 | 46 | 21 | 8 | 1 | 1 | 0 | 4 | 7 | 11 |
| Business and Management | 64 | 67 | 76 | 29 | 25 | 15 | 2 | 1 | 1 | 6 | 7 | 9 |
| Sales and Marketing | 70 | 75 | 75 | 23 | 17 | 11 | 2 | 1 | 1 | 5 | 7 | 12 |
| Tourism | 69 | 73 | 78 | 28 | 20 | 14 | C.. | C.. | 2 | 2 | 4 | 8 |
| Banking, Finance and Related Fields | 51 | 69 | 71 | 42 | 22 | 11 | 1 | 2 | 1 | 7 | 7 | 18 |
| Other Management and Commerce | 82 | 83 | 89 | 13 | 11 | 11 | 3 | 0 | 0 | 3 | 6 | C.. |
| Society and culture | Total | 43 | 57 | 67 | 52 | 36 | 22 | 1 | 1 | 2 | 4 | 6 | 9 |
| Political Science and Policy Studies | 33 | 52 | 63 | 62 | 42 | 26 | 2 | 1 | 2 | 3 | 5 | 10 |
| Studies in Human Society | 41 | 53 | 67 | 53 | 40 | 23 | 2 | 2 | 2 | 4 | 5 | 8 |
| Human Welfare Studies and Services | 64 | 74 | 70 | 33 | 23 | 14 | 0 | C.. | 3 | C.. | 5 | 14 |
| Behavioural Science | 41 | 49 | 60 | 54 | 45 | 29 | 2 | 2 | 2 | 4 | 5 | 9 |
| Law | 40 | 65 | 74 | 55 | 28 | 15 | 0 | 0 | 1 | 4 | 7 | 9 |
| Justice and Law Enforcement | 47 | 71 | 65 | 50 | 18 | 23 | C.. | C.. | C.. | 3 | 9 | 4 |
| Librarianship, Information Management and Curatorial Studies | C.. | C.. | C.. | C.. | C.. | 100 | 0 | C.. | 0 | 0 | C.. | 0 |
| Language and Literature | 38 | 51 | 62 | 55 | 40 | 27 | 2 | 2 | 3 | 6 | 7 | 8 |
| Philosophy and Religious Studies | 34 | 49 | 60 | 60 | 46 | 30 | 4 | 3 | 3 | 3 | 2 | 8 |
| Economics and Econometrics | 48 | 63 | 74 | 46 | 29 | 15 | 0 | 1 | 2 | 6 | 7 | 10 |
| Sport and Recreation | 57 | 66 | 76 | 39 | 29 | 14 | 2 | 1 | 1 | 3 | 5 | 9 |
| Other Society and Culture | 46 | 61 | 68 | 47 | 29 | 20 | 2 | 1 | 3 | 5 | 7 | 9 |
| Creative arts | Total | 64 | 69 | 71 | 27 | 21 | 15 | 5 | 4 | 4 | 5 | 6 | 10 |
| Performing Arts | 47 | 56 | 61 | 43 | 33 | 24 | 6 | 5 | 5 | 4 | 5 | 10 |
| Visual Arts and Crafts | 60 | 63 | 69 | 27 | 24 | 16 | 7 | 6 | 5 | 6 | 7 | 10 |
| Graphic and Design Studies | 71 | 75 | 74 | 17 | 15 | 11 | 6 | 3 | 3 | 6 | 7 | 11 |
| Communication and Media Studies | 67 | 73 | 79 | 28 | 20 | 11 | 2 | 2 | 2 | 3 | 5 | 7 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

## Outcomes by narrow field for level 1-3 certificate completers

### Earnings

* Young level 1-3 certificate completers in aerospace engineering and technologyhad the highest median earnings five years post study, at $55,800. This was followed by *electrical and electronic engineering and technology* ($45,200), *biological sciences* ($43,100) and *banking, finance and related fields* ($41,000). These were 167 percent, 136 percent, 129 percent and 123 percent of the national median earnings in 2010 respectively.
* At the other end of the spectrum, *curriculum and education studies, complementary therapies, fisheries studies* and *rehabilitation therapies* young level 1-3 certificate completers had the lowest median of $24,900, $26,700, $27,200 and $27,800 five years after leaving study respectively.
* *Biological sciences, other education,* and *social skills programmes* level 1-3 certificate graduates had the highest wage growth trajectory, averaging 19 percent increase each year after study, while *fisheries studies* and *sales and marketing* graduates had the lowest (3 percent).
* Some broad fields had wider variation between narrow fields than others. Comparing wages earned five years after study, *engineering and related technologies* varied in range the most, followed by *education* (43 percentage points) and *management and commerce* (25 percentage points). The least variable were *natural and physical sciences* (6 percentage points) *food, hospitality and personal services* (7 percentage points) and *society and culture* (8 percentage points).

### Destinations

* There were high employment rates in the first year after study for *pharmacy* (80 percent), *fisheries studies* and *other education* (67 percent) and *other management and commerce* (62 percent) young level 1-3 certificate completers.
* Five years after finishing study, 78 percent of Aerospace engineering and technology young level 1-3 certificate completers who were in New Zealand were in employment, followed by building (66 percent) and *electrical and electronic engineering and technology* and *philosophy and religious studies* graduates which both had 65 percent employment.
* The proportion in further study five years after study was high for young level 1-3 certificate graduates in *curriculum and education studies* (41 percent), *other education* and *language and literature* (39 percent) and *biological sciences* (38 percent).

Table 43

Median earnings for young level 1-3 certificate completers, one two and five years after study, by narrow field of study

| **Broad field of study** | **Narrow field of study** | **One** | **Two** | **Five** |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | $24,824 | $27,844 | $43,370 |
| Mathematical Sciences | C.. | C.. | $40,957 |
| Physics and Astronomy | C.. | C.. | C.. |
| Chemical Sciences | C.. | C.. | C.. |
| Earth Sciences | C.. | C.. | C.. |
| Biological Sciences | $21,268 | $28,473 | $43,135 |
| Other Natural and Physical Sciences | C.. | C.. | C.. |
| Information Technology | Total | $23,951 | $25,564 | $34,483 |
| Computer Science | $24,591 | $29,154 | $35,083 |
| Information Systems | $20,266 | $24,817 | $33,029 |
| Other Information Technology | $27,766 | $25,002 | $37,251 |
| Engineering and Related Technologies | Total | $27,655 | $31,029 | $39,621 |
| Manufacturing, Engineering and Technology | $25,797 | $28,949 | $30,205 |
| Process and Resources Engineering | $21,917 | $29,474 | $40,213 |
| Automotive Engineering and Technology | $26,263 | $30,743 | $37,542 |
| Mechanical and Industrial Engineering and Technology | $28,467 | $30,755 | $40,938 |
| Civil Engineering | $33,814 | $40,177 | C.. |
| Electrical and Electronic Engineering and Technology | $28,430 | $30,945 | $45,164 |
| Aerospace Engineering and Technology | $34,370 | $38,342 | $55,762 |
| Maritime Engineering and Technology | $22,670 | $28,269 | $31,637 |
| Other Engineering and Related Technologies | C.. | $28,634 | C.. |
| Architecture and Building | Total | $25,964 | $28,154 | $37,660 |
| Architecture and Urban Environment | C.. | C.. | C.. |
| Building | $25,964 | $28,199 | $37,660 |
| Agriculture, Environmental and Related Studies | Total | $25,543 | $31,496 | $35,111 |
| Agriculture | $25,853 | $31,920 | $37,137 |
| Horticulture and Viticulture | $20,886 | $24,955 | $31,373 |
| Forestry Studies | $24,788 | $28,979 | $34,208 |
| Fisheries Studies | $24,212 | $28,320 | $27,183 |
| Environmental Studies | $28,916 | C.. | C.. |
| Other Agriculture, Environmental and Related Studies | $25,688 | $32,760 | $34,148 |
| Health | Total | $26,460 | $29,107 | $36,890 |
| Medical Studies | C.. | C.. | C.. |
| Nursing | $22,963 | $22,995 | $34,413 |
| Pharmacy | $25,618 | $31,401 | $34,309 |
| Veterinary Studies | $26,729 | $28,272 | $32,946 |
| Public Health | $29,428 | $34,045 | $38,854 |
| Rehabilitation Therapies | C.. | C.. | $27,811 |
| Complementary Therapies | C.. | C.. | $26,702 |
| Other Health | $22,350 | $26,207 | $33,250 |
| Education | Total | $22,391 | $22,512 | $37,768 |
| Teacher Education | $24,792 | $26,933 | $38,501 |
| Curriculum and Education Studies | C.. | C.. | $24,897 |
| Other Education | $19,721 | C.. | $39,448 |
| Management and Commerce | Total | $26,275 | $29,605 | $34,983 |
| Accountancy | C.. | C.. | $35,368 |
| Business and Management | $25,697 | $29,752 | $37,709 |
| Sales and Marketing | $29,098 | $30,662 | $32,807 |
| Tourism | $25,875 | $29,366 | $35,099 |
| Office Studies | $25,398 | $29,212 | $34,188 |
| Banking, Finance and Related Fields | C.. | C.. | $40,977 |
| Other Management and Commerce | $33,610 | $35,755 | $38,350 |
| Society and Culture | Total | $19,943 | $23,969 | $32,903 |
| Political Science and Policy Studies | C.. | C.. | C.. |
| Studies in Human Society | $17,860 | $24,993 | C.. |
| Human Welfare Studies and Services | $19,493 | $23,334 | $30,595 |
| Behavioural Science | C.. | C.. | C.. |
| Law | C.. | C.. | C.. |
| Justice and Law Enforcement | C.. | C.. | C.. |
| Language and Literature | $21,339 | $23,003 | $30,217 |
| Philosophy and Religious Studies | $24,712 | $31,075 | $34,013 |
| Economics and Econometrics | C.. | C.. | C.. |
| Sport and Recreation | $18,641 | $24,395 | $34,731 |
| Other Society and Culture | $21,864 | $22,252 | $31,550 |
| Creative Arts | Total | $23,480 | $27,618 | $33,611 |
| Performing Arts | $16,720 | $24,351 | $33,230 |
| Visual Arts and Crafts | $24,874 | $24,683 | $29,687 |
| Graphic and Design Studies | $23,524 | $28,211 | $33,577 |
| Communication and Media Studies | $26,114 | $28,855 | $36,931 |
| Other Creative Arts | C.. | C.. | C.. |
| Food, hospitality and personal services | Total | $21,413 | $25,422 | $31,116 |
| Food and Hospitality | $21,795 | $26,549 | $32,695 |
| Personal Services | $21,185 | $24,432 | $28,465 |
| Mixed field programmes | Total | $19,358 | $23,027 | $32,562 |
| General Education Programmes | $18,540 | $18,997 | $32,529 |
| Social Skills Programmes | $18,989 | $27,349 | $37,509 |
| Employment Skills Programmes | $21,355 | $30,052 | $31,105 |

Table 44

Median earnings of young domestic level 1-3 certificate completers, one, two and five years after study, as a percentage of the national median earnings by narrow field of study,

| **Broad field of study** | **Narrow field of study** | **One %** | **Two %** | **Five %** |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | 74 | 84 | 130 |
| Mathematical Sciences | C.. | C.. | 123 |
| Physics and Astronomy | C.. | C.. | C.. |
| Chemical Sciences | C.. | C.. | C.. |
| Earth Sciences | C.. | C.. | C.. |
| Biological Sciences | 64 | 85 | 129 |
| Other Natural and Physical Sciences | C.. | C.. | C.. |
| Information Technology | Total | 72 | 77 | 103 |
| Computer Science | 74 | 87 | 105 |
| Information Systems | 61 | 74 | 99 |
| Other Information Technology | 83 | 75 | 112 |
| Engineering and Related Technologies | Total | 83 | 93 | 119 |
| Manufacturing, Engineering and Technology | 77 | 87 | 91 |
| Process and Resources Engineering | 66 | 88 | 121 |
| Automotive Engineering and Technology | 79 | 92 | 113 |
| Mechanical and Industrial Engineering and Technology | 85 | 92 | 123 |
| Civil Engineering | 101 | 121 | C.. |
| Electrical and Electronic Engineering and Technology | 85 | 93 | 136 |
| Aerospace Engineering and Technology | 103 | 115 | 167 |
| Maritime Engineering and Technology | 68 | 85 | 95 |
| Other Engineering and Related Technologies | C.. | 86 | C.. |
| Architecture and Building | Total | 78 | 84 | 113 |
| Architecture and Urban Environment | C.. | C.. | C.. |
| Building | 78 | 85 | 113 |
| Agriculture, Environmental and Related Studies | Total | 77 | 95 | 105 |
| Agriculture | 78 | 96 | 111 |
| Horticulture and Viticulture | 63 | 75 | 94 |
| Forestry Studies | 74 | 87 | 103 |
| Fisheries Studies | 73 | 85 | 82 |
| Environmental Studies | 87 | C.. | C.. |
| Other Agriculture, Environmental and Related Studies | 77 | 98 | 102 |
| Health | Total | 79 | 87 | 111 |
| Medical Studies | C.. | C.. | C.. |
| Nursing | 69 | 69 | 103 |
| Pharmacy | 77 | 94 | 103 |
| Veterinary Studies | 80 | 85 | 99 |
| Public Health | 88 | 102 | 117 |
| Rehabilitation Therapies | C.. | C.. | 83 |
| Complementary Therapies | C.. | C.. | 80 |
| Other Health | 67 | 79 | 100 |
| Education | Total | 67 | 68 | 113 |
| Teacher Education | 74 | 81 | 116 |
| Curriculum and Education Studies | C.. | C.. | 75 |
| Other Education | 59 | C.. | 118 |
| Management and Commerce | Total | 79 | 89 | 105 |
| Accountancy | C.. | C.. | 106 |
| Business and Management | 77 | 89 | 113 |
| Sales and Marketing | 87 | 92 | 98 |
| Tourism | 78 | 88 | 105 |
| Office Studies | 76 | 88 | 103 |
| Banking, Finance and Related Fields | C.. | C.. | 123 |
| Other Management and Commerce | 101 | 107 | 115 |
| Society and Culture | Total | 60 | 72 | 99 |
| Political Science and Policy Studies | C.. | C.. | C.. |
| Studies in Human Society | 54 | 75 | C.. |
| Human Welfare Studies and Services | 58 | 70 | 92 |
| Behavioural Science | C.. | C.. | C.. |
| Law | C.. | C.. | C.. |
| Justice and Law Enforcement | C.. | C.. | C.. |
| Language and Literature | 64 | 69 | 91 |
| Philosophy and Religious Studies | 74 | 93 | 102 |
| Economics and Econometrics | C.. | C.. | C.. |
| Sport and Recreation | 56 | 73 | 104 |
| Other Society and Culture | 66 | 67 | 95 |
| Creative Arts | Total | 70 | 83 | 101 |
| Performing Arts | 50 | 73 | 100 |
| Visual Arts and Crafts | 75 | 74 | 89 |
| Graphic and Design Studies | 71 | 85 | 101 |
| Communication and Media Studies | 78 | 87 | 111 |
| Other Creative Arts | C.. | C.. | C.. |
| Food, hospitality and personal services | Total | 64 | 76 | 93 |
| Food and Hospitality | 65 | 80 | 98 |
| Personal Services | 64 | 73 | 85 |
| Mixed field programmes | Total | 58 | 69 | 98 |
| General Education Programmes | 56 | 57 | 98 |
| Social Skills Programmes | 57 | 82 | 113 |
| Employment Skills Programmes | 64 | 90 | 93 |

Table 45

Growth in median annual earnings of young domestic level 1-3 certificate completers, over the first five years after study by narrow field of study.

| **Broad field of study** | **Narrow field of study** | **One %** | **Two %** | **Five %** |
| --- | --- | --- | --- | --- |
| Natural and Physical Sciences | Total | 12 | 75 | 15 |
| Biological Sciences | 34 | 103 | 19 |
| Information Technology | Total | 7 | 44 | 10 |
| Computer Science | 19 | 43 | 9 |
| Information Systems | 22 | 63 | 13 |
| Other Information Technology | -10 | 34 | 8 |
| Engineering and Related Technologies | Total | 12 | 43 | 9 |
| Manufacturing, Engineering and Technology | 12 | 17 | 4 |
| Process and Resources Engineering | 34 | 83 | 16 |
| Automotive Engineering and Technology | 17 | 43 | 9 |
| Mechanical and Industrial Engineering and Technology | 8 | 44 | 10 |
| Civil Engineering | 19 | C.. | C.. |
| Electrical and Electronic Engineering and Technology | 9 | 59 | 12 |
| Aerospace Engineering and Technology | 12 | 62 | 13 |
| Maritime Engineering and Technology | 25 | 40 | 9 |
| Architecture and Building | Total | 8 | 45 | 10 |
| Building | 9 | 45 | 10 |
| Agriculture, Environmental and Related Studies | Total | 23 | 37 | 8 |
| Agriculture | 23 | 44 | 9 |
| Horticulture and Viticulture | 19 | 50 | 11 |
| Forestry Studies | 17 | 38 | 8 |
| Fisheries Studies | 17 | 12 | 3 |
| Other Agriculture, Environmental and Related Studies | 28 | 33 | 7 |
| Health | Total | 10 | 39 | 9 |
| Nursing | 0 | 50 | 11 |
| Pharmacy | 23 | 34 | 8 |
| Veterinary Studies | 6 | 23 | 5 |
| Public Health | 16 | 32 | 7 |
| Other Health | 17 | 49 | 10 |
| Education | Total | 1 | 69 | 14 |
| Teacher Education | 9 | 55 | 12 |
| Other Education | C.. | 100 | 19 |
| Management and Commerce | Total | 13 | 33 | 7 |
| Business and Management | 16 | 47 | 10 |
| Sales and Marketing | 5 | 13 | 3 |
| Tourism | 13 | 36 | 8 |
| Office Studies | 15 | 35 | 8 |
| Other Management and Commerce | 6 | 14 | 3 |
| Society and Culture | Total | 20 | 65 | 13 |
| Human Welfare Studies and Services | 20 | 57 | 12 |
| Language and Literature | 8 | 42 | 9 |
| Philosophy and Religious Studies | 26 | 38 | 8 |
| Sport and Recreation | 31 | 86 | 17 |
| Other Society and Culture | 2 | 44 | 10 |
| Creative Arts | Total | 18 | 43 | 9 |
| Performing Arts | 46 | 99 | 19 |
| Visual Arts and Crafts | -1 | 19 | 5 |
| Graphic and Design Studies | 20 | 43 | 9 |
| Communication and Media Studies | 10 | 41 | 9 |
| Food, hospitality and personal services | Total | 19 | 45 | 10 |
| Food and Hospitality | 22 | 50 | 11 |
| Personal Services | 15 | 34 | 8 |
| Mixed field programmes | Total | 19 | 68 | 14 |
| General Education Programmes | 2 | 75 | 15 |
| Social Skills Programmes | 44 | 98 | 19 |
| Employment Skills Programmes | 41 | 46 | 10 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

Table 46

Destinations by narrow field of study for young domestic certificate 1-3 completers who remain in New Zealand

|  |  | Employment % | | | Further Study % | | | Benefit % | | | Other % | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Broad field of study** | **Narrow field of study** | One | **Two** | **Five** | One | **Two** | **Five** | One | **Two** | **Five** | One | **Two** | **Five** |
| Natural and physical sciences | Total | C.. | 32 | 51 | C.. | 58 | 37 | C.. | 6 | C.. | C.. | 6 | 9 |
| Mathematical Sciences | 0 | 0 | 50 | 100 | 100 | 25 | 0 | 0 | 0 | 0 | 0 | 0 |
| Physics and Astronomy | C.. | C.. | C.. | C.. | C.. | C.. | C.. | 0 | 0 | C.. | 0 | 0 |
| Chemical Sciences | C.. | C.. | C.. | 67 | 67 | C.. | C.. | C.. | C.. | 0 | C.. | C.. |
| Biological Sciences | 25 | 33 | 56 | 75 | 57 | 38 | 0 | C.. | C.. | 0 | 5 | 0 |
| Other Natural and Physical Sciences | C.. | 50 | C.. | C.. | C.. | C.. | C.. | C.. | C.. | C.. | 0 | C.. |
| Information technology | Total | 18 | 30 | 43 | 61 | 48 | 32 | 15 | 16 | 18 | 5 | 5 | 7 |
| Computer Science | C.. | 40 | 54 | C.. | 40 | 32 | C.. | 13 | 10 | C.. | C.. | 4 |
| Information Systems | 15 | C.. | 37 | 57 | C.. | 32 | 19 | C.. | 24 | 8 | C.. | 6 |
| Other Information Technology | 19 | 35 | 45 | 63 | 46 | 33 | 13 | 12 | 15 | 2 | 5 | 8 |
| Engineering and related technologies | Total | 39 | 44 | 60 | 52 | 48 | 29 | 6 | 5 | 7 | 3 | 3 | 5 |
| Manufacturing, Engineering and Technology | 24 | 43 | 56 | 63 | 50 | 20 | 7 | 5 | 17 | 4 | 4 | 7 |
| Process and Resources Engineering | 30 | 36 | 61 | 50 | 45 | 28 | 10 | 9 | 6 | 0 | 0 | 6 |
| Automotive Engineering and Technology | 37 | 40 | 60 | 55 | 53 | 33 | 5 | 5 | 4 | 4 | 3 | 4 |
| Mechanical and Industrial Engineering and Technology | 34 | 36 | 59 | 55 | 52 | 29 | 8 | 9 | 8 | 4 | 4 | 5 |
| Electrical and Electronic Engineering and Technology | 45 | 51 | 65 | 49 | 45 | 29 | 4 | 3 | 2 | 3 | 1 | 5 |
| Aerospace Engineering and Technology | 45 | 70 | 78 | 47 | 26 | 15 | 3 | C.. | C.. | 6 | 2 | 5 |
| Maritime Engineering and Technology | 53 | 48 | 46 | 38 | 40 | 28 | 9 | 6 | 19 | 4 | 6 | 7 |
| Other Engineering and Related Technologies | C.. | 38 | 40 | C.. | 50 | 20 | C.. | C.. | C.. | C.. | 0 | 20 |
| Architecture and building | Total | 41 | 47 | 65 | 47 | 43 | 23 | 5 | 7 | 4 | 7 | 3 | 5 |
| Building | 41 | 47 | 66 | 47 | 42 | 22 | 5 | 8 | 5 | 7 | 3 | 5 |
| Agriculture, environmental and related studies | Total | 45 | 51 | 60 | 41 | 36 | 23 | 6 | 6 | 10 | 8 | 7 | 7 |
| Agriculture | 43 | 52 | 64 | 45 | 39 | 24 | 6 | 6 | 5 | 6 | 3 | 8 |
| Horticulture and Viticulture | C.. | C.. | 57 | C.. | C.. | 23 | C.. | C.. | 9 | C.. | C.. | 9 |
| Forestry Studies | 43 | 52 | 59 | 37 | 25 | 21 | 10 | 11 | 15 | 10 | 11 | 5 |
| Fisheries Studies | 67 | C.. | 63 | 22 | C.. | 13 | C.. | C.. | 0 | 0 | C.. | 13 |
| Environmental Studies | C.. | C.. | C.. | C.. | 40 | C.. | C.. | C.. | C.. | C.. | C.. | C.. |
| Other Agriculture, Environmental and Related Studies | 48 | 51 | 58 | 37 | 34 | 25 | 3 | 4 | 13 | 12 | 10 | 4 |
| Health | Total | 39 | 45 | 59 | 49 | 40 | 26 | 9 | 11 | 7 | 4 | 4 | 8 |
| Pharmacy | 80 | C.. | 54 | C.. | C.. | 23 | 10 | C.. | 8 | C.. | C.. | 8 |
| Veterinary Studies | 28 | 48 | 54 | 64 | 41 | 26 | 4 | 6 | 9 | 2 | 2 | 11 |
| Public Health | 53 | 47 | 63 | 31 | 26 | 24 | 10 | 16 | 4 | 5 | 8 | 9 |
| Rehabilitation Therapies | 50 | C.. | 50 | 33 | C.. | 25 | 17 | C.. | 25 | C.. | C.. | C.. |
| Complementary Therapies | C.. | 38 | 53 | C.. | 38 | 32 | C.. | C.. | 16 | C.. | C.. | C.. |
| Other Health | 36 | 43 | 54 | 47 | 43 | 29 | 13 | 11 | 9 | 7 | 3 | 9 |
| Education | Total | C.. | 31 | 51 | C.. | 60 | 29 | C.. | 9 | 13 | C.. | 6 | 8 |
| Teacher Education | 41 | 27 | 54 | 41 | 60 | 21 | 18 | 10 | 13 | C.. | C.. | 8 |
| Curriculum and Education Studies | C.. | C.. | 47 | C.. | 50 | 41 | C.. | 0 | 12 | C.. | C.. | C.. |
| Other Education | 67 | C.. | 44 | 17 | C.. | 39 | C.. | C.. | 11 | 0 | C.. | 11 |
| Management and commerce | Total | 39 | 44 | 52 | 44 | 36 | 28 | 12 | 14 | 13 | 5 | 6 | 8 |
| Accountancy | C.. | C.. | 45 | 33 | C.. | 36 | 33 | C.. | 27 | 0 | C.. | C.. |
| Business and Management | 36 | 46 | 52 | 50 | 34 | 29 | 11 | 13 | 9 | 3 | 7 | 10 |
| Sales and Marketing | 42 | 47 | 54 | 44 | 34 | 24 | 9 | 15 | 11 | 5 | 4 | 7 |
| Tourism | 50 | 56 | 58 | 37 | 29 | 24 | 10 | 10 | 12 | 3 | 4 | 6 |
| Office Studies | 38 | 40 | 50 | 44 | 39 | 28 | 13 | 15 | 14 | 5 | 6 | 8 |
| Other Management and Commerce | 62 | C.. | 50 | 23 | C.. | 33 | C.. | C.. | 0 | 8 | C.. | 8 |
| Society and culture | Total | 32 | 33 | 48 | 53 | 46 | 32 | 9 | 14 | 11 | 6 | 7 | 9 |
| Studies in Human Society | 28 | 23 | 50 | 50 | 41 | 33 | 14 | 27 | 33 | 10 | 11 | 17 |
| Human Welfare Studies and Services | 47 | 38 | 48 | 36 | 39 | 30 | 10 | 12 | 13 | 6 | 9 | 11 |
| Behavioural Science | C.. | 0 | C.. | C.. | 100 | C.. | C.. | 0 | C.. | C.. | 0 | C.. |
| Language and Literature | 20 | 24 | 32 | 64 | 54 | 39 | 10 | 14 | 15 | 7 | 7 | 14 |
| Philosophy and Religious Studies | C.. | 42 | 65 | C.. | 58 | 24 | C.. | C.. | 0 | C.. | C.. | 18 |
| Economics and Econometrics | C.. | C.. | C.. | C.. | C.. | C.. | C.. | 0 | C.. | C.. | 0 | C.. |
| Sport and Recreation | 31 | 36 | 51 | 61 | 48 | 33 | 4 | 10 | 9 | 5 | 5 | 7 |
| Other Society and Culture | 44 | 46 | 54 | 30 | 33 | 18 | 15 | 13 | 18 | 7 | C.. | 14 |
| Creative arts | Total | 34 | 44 | 56 | 55 | 42 | 30 | 8 | 9 | 8 | 3 | 5 | 7 |
| Performing Arts | 26 | 36 | 49 | 61 | 48 | 33 | 8 | 8 | 10 | 3 | 6 | 10 |
| Visual Arts and Crafts | 41 | 43 | 57 | 51 | 41 | 27 | 5 | 9 | 10 | 3 | 5 | 7 |
| Graphic and Design Studies | 12 | C.. | 52 | 77 | C.. | 32 | 6 | C.. | 5 | 3 | C.. | 9 |
| Communication and Media Studies | 46 | 56 | 63 | 40 | 35 | 30 | 11 | 8 | 5 | 3 | 3 | 4 |
| Food, hospitality and personal services | Total | 36 | 53 | 57 | 47 | 29 | 22 | 12 | 14 | 14 | 5 | 5 | 7 |
| Food and Hospitality | 39 | 57 | 58 | 46 | 27 | 24 | 11 | 11 | 11 | 4 | 5 | 7 |
| Personal Services | 33 | 48 | 54 | 48 | 31 | 19 | 13 | 16 | 19 | 6 | 5 | 8 |
| Mixed field programmes | Total | 21 | 24 | 36 | 53 | 51 | 33 | 17 | 19 | 23 | 8 | 6 | 8 |
| General Education Programmes | 24 | 30 | 42 | 52 | 43 | 33 | 12 | 18 | 18 | 11 | 9 | 7 |
| Social Skills Programmes | 17 | 19 | 40 | 61 | 65 | 34 | 14 | 14 | 15 | 6 | 5 | 10 |
| Employment Skills Programmes | 18 | 27 | 31 | 45 | 36 | 32 | 35 | 36 | 29 | 3 | 4 | 9 |

Source: Statistics New Zealand, Integrated Data Infrastructure, Ministry of Education interpretation. Refer to Chapter 12 for full notes.

# Data and definitions

This project reports on destinations and earnings for young graduates over the first five years after graduates complete a qualification. Results are presented by qualification level and field of study. Technical details of the data used in this project and the associated definitions are provided below.

## Data.

### Integrated Data Infrastructure dataset.

The Integrated Data Infrastructure (IDI) dataset was used to obtain the results in this report. This longitudinal dataset is managed by Statistics New Zealand and links together each individual’s tertiary education enrolment and completions data to data on:

• earnings (from Inland Revenue)

• welfare benefits (from the Ministry of Social Development)

• border crossings (from Immigration New Zealand).

The tertiary education data in the IDI prototype has been provided by the Ministry of Education and is sourced from the Single Data Return from tertiary providers. The immigration data is derived from passenger manifestos. The earnings data in the IDI prototype is derived from tax data collected by Inland Revenue. Welfare benefits data is derived from data used by the Ministry of Social Development to administer the benefits system.

Confidentiality of data

The results published in this report all comply with the Statistics New Zealand’s confidentiality requirements. These include a requirement to use random rounding to base 3 for all counts including those which underlie percentages. Additionally, when publishing employment rates or earnings, the corresponding provider, enterprise and graduate counts for that qualification level X field of study combination must be higher than prescribed limits. Blanks may also be suppressed in line with Statistic New Zealand’s confidentiality rules. Results from a single provider are suppressed in all cases.

Random rounding may result in a total not agreeing with the sum of individual items shown in a table. It is important to take this into account when comparing percentages as some variation may simply be due to this factor and not to an underlying trend.  For example, if the count for each of the four destinations is 20 (and so 80 in total), then the percentage for a single destination can vary from 22 to 28 merely due to rounding.  But if the count for each destination is 100 (and so 400 in total), then the variation is from 24.4 to 25.6. In general, the smaller the count, the greater the variation will occur. How the counts are distributed across destinations also affects the variation.

Cells marked ‘C..’ throughout this report represent numbers suppressed as not meeting Statistics New Zealand’s confidentiality requirements. This includes suppression of blank cells in line with Statistic New Zealand’s confidentiality rules.

### Disclaimer

The following disclaimer applies to all results obtained using the IDI, including the results in this report:

The IDI is managed under strict confidentiality rules by Statistics New Zealand. These rules protect individual people and businesses from identification.

The data extraction was undertaken while the authors were on secondment to Statistics New Zealand. The results are not official statistics, they have been created for research purposes from the Integrated Data Infrastructure (IDI) prototype managed by Statistics New Zealand. On-going work within Statistics New Zealand to develop the IDI means it will not be possible to exactly reproduce the data presented here.

The results presented in this study are the work of the authors. Statistics New Zealand and the Ministry of Education take no responsibility for any omissions or errors in the information contained here.

Access to the data used in this study was provided by Statistics New Zealand in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, business or organisation. The results in this report have been confidentialised to protect individual people and businesses from identification.

Careful consideration has been given to the privacy, security and confidentiality issues associated with using administrative data in the IDI prototype. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from [www.stats.govt.nz](http://www.stats.govt.nz).

The results are based in part on tax data supplied by Inland Revenue to Statistics New Zealand under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit-record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI prototype for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

### Completions

The analyses and results in this report only relate to students who have completed a qualification that they enrolled in. Enrolments and completions must match by qualification code and level, and provider. Graduates may be included in the results more than once if they have completed a qualification in more than one field of study, or have completed more than one qualification if the qualifications are completed at different levels and/or in different years.

The year that a qualification is completed is assumed to be the last year of enrolment in that qualification. This is because sometimes completions are not recorded in the year that a student actually completes their qualification, for example due to administrative delays or other peculiarities. Completions are excluded in cases where the recorded completion occurs three or more years before the last year of enrolment in that qualification.

### Data is aggregated across two leaving cohorts.

The analyses and results in this report are based on aggregated data from two leaving cohorts. Data has been aggregated in order to increase the numbers in the samples and hence, to ensure Statistics New Zealand’s confidentiality requirements could be met and to improve statistical quality and robustness.

Cohorts are chosen so that their post-study employment outcomes are always compared in the same economic climate: the 2009 and 2010 tax years. For instance, one year post-study outcomes are calculated for graduates who completed in 2007 or 2008, and five year post-study outcomes are calculated for graduates who completed in 2003 or 2004.

### Domestic students

We report outcomes and earnings for domestic students only, excluding any international students. We do this because we have no information about the prior qualifications, labour market experience or earnings of international students, so we can be less certain of associating outcomes to New Zealand study experiences for international students.

A domestic student is a student who is a New Zealand citizen, or who is a New Zealand permanent resident or Australian citizen and is not residing overseas. In cases where the domestic status changes for a student across years, their status in their last year of enrolment for a qualification is used.

### Funding types.

Completions are excluded from the results if the graduate has received any funding for this qualification that suggests that they may have had previous work experience. In particular, this includes qualifications where a graduate has received Skill Enhancement, Industry Training Off Job component, STAR Funding, English for Migrants, Youth Action Training, or Other contracts funding.

## Definitions

Number of years post-study.

The number of years post study are defined using tax years for earnings and all destinations except further study where calendar years are used. Table 48 below shows how the aggregated cohorts align with tax and calendar years for each post study year.

Table 47

Alignment of cohorts with tax and calendar years.

|  |  |  |  |
| --- | --- | --- | --- |
| Cohort | Years post study | Calendar year | Tax year |
| 07/08 | 1 | 2008/2009 | 2009/2010 |
| 06/07 | 2 | 2008/2009 | 2009/2010 |
| 03/04 | 5 | 2008/2009 | 2009/2010 |

Graduate destinations

The graduate destinations used in this report are:

Further study

Benefits

Employment

Unknown/Other

Within each leaving cohort, graduates are assigned to only a single destination per year after study using the below business rules. These rules take account of ‘substantiveness’ – how long a graduate is pursuing an activity – and a ‘predominance’ test – what is the ‘main’ activity. Where a graduate meets the criteria for more than one destination, the destination is determined using the order of precedence: Further Study, Benefit, Employment, Unknown/Other.

Results are only determined for graduates who are in New Zealand in any particular year. A graduate is regarded as being in New Zealand if, overall, they are in NZ for longer than three months in that tax year.

Destinations are defined as follows:

*Further study* – graduates who are not classified as Overseas and do any tertiary study in a calendar year.

*Benefits* – graduates who are not classified in either the Overseas or Further study categories and who are on a benefit for at least 4 months in a tax year and who are not in employment for a longer time than this.

*Employment* – graduates who are not classified in any of the above categories and who receive wages and salary, paid parental leave and/or ACC compensation for at least four months or more in a tax year and/or receive any self-employment income.

*Other* – graduates who do not meet any of the above criteria, or for whom no matching data can be found in the IDI.

### Benefit and Unknown/Other destinations combined for postgraduates

Few postgraduates go on a benefit after study. Thus for these graduates, the Benefit category has been merged with the Unknown/other category to reduce the number of values that need to be suppressed due to Statistics New Zealand’s confidentiality criteria.

### Earnings

All earnings reported are gross earnings and earnings are only presented for graduates for whom we deem employment is their main activity, in each year independently post-graduation. *Earnings* means income from wages, salaries, self-employment, paid parental leave and accident compensation payments. It excludes unearned income such as rents, dividends, interests and transfer payments such as benefits.

We present graduates’ actual earnings (rather than annualised earnings) as some types of work by their nature are seasonal or contract based. No account is taken of hours of work and so earnings will be understated for any qualification/field of study where there are significant numbers of young graduates in part-time work.

### Adjusting the data for changes in national wage rates

Earnings are scaled using the Labour Cost Index to normalise differences between the 2009 and 2010 tax years and are presented in 2011 dollars.

Additionally, throughout this report, we have compared graduate earnings to the national median earnings for the 2010 calendar year for all workers aged between 15-64 years who have earnings recorded in the IDI, no matter what their qualifications, occupations and hours of work.

### Young graduates and qualification level

We report the outcomes only for ‘young’ graduates. For each qualification level, we set an age range that means we are looking only at those who start that qualification and move to completion before undertaking substantial time in the workforce. We restrict the analysis to young graduates because the aim of the analysis is to support the decision-making of young people. If we mixed the outcomes of young graduates with the outcomes for people who undertake tertiary study after substantial work experience, we would be unable to separate the effects of the qualification from the effects of the work experience.

Young graduates are defined as:

21 years or under at certificate level

23 years or under at diploma level

24 years or under for three-year bachelors degrees, with each year of additional study requirement adding a year to the age cut-off for longer qualifications[[8]](#footnote-8)

26 years or under for one year postgraduate study or graduate certificates or diplomas

27 years or under for masters

29 years or under for doctorate students.

The age of a graduate is based on their age as at 1 July of their last year of enrolment in a qualification.

### Field of study

We use the New Zealand Standard Classification of Education (or NZSCED) to classify people’s study into various fields of study. NZSCED has three levels of classification – broad field of study, narrow field and detailed field. We determine what field or fields a graduate has pursued by looking at the courses the graduate took while studying and working out what are the predominant fields of study taken. This method uses level of study, field of study, year of study, and study load of each course that a graduate has studied in their last three years of study, usually of the same level as the final year of study or higher, to determine what best constitutes their main field(s) of study – or specialisation(s). It is important to note that this method may give different results to simply using the classification given by the provider.

One consequence of this is that sometimes, less obvious qualifications may be categorised under a particular field of study for some graduates. For example, as expected, Massey University graduates who complete a Bachelor of Veterinary Science are classified under veterinary studies at bachelors level. However, some Bachelor of Agricultural Science and Bachelor of Science graduates at Lincoln University are also included in this field, as are Unitec graduates who complete a Bachelor of Applied Animal Technology. Similarly, under dental studies, at bachelors level we find both University of Otago Bachelor of Dental Surgery graduates and Auckland University of Technology Bachelor of Health Science (Oral Health) graduates.

Most of our analysis is by broad field of study because if we divide our population of graduates too finely, we end up having to suppress more data because it breaches the Statistics New Zealand confidentiality limits.

People graduating in more than one field of study are counted in each of the fields of study. The number of students in each narrow field of study may not sum to the broad field of study total. This is because students can be enrolled in multiple narrow fields of study.

Field of study is broken down into broad fields using the New Zealand Standard Classification of Education (NZSCED[[9]](#footnote-9)):

Natural and Physical Sciences

Information Technology

Engineering and Related Technologies

Architecture and Building

Agriculture, Environmental and Related Studies

Health

Education

Management and Commerce

Society and Culture

Creative Arts

Food, Hospitality and Personal Services

Mixed Field Programmes.

Each broad field of study contains a spread of types of qualifications. For instance, the broad field Health covers *medicine, veterinary science, dentistry, nursing* and qualifications for low level health workers such as nurse-aides. Natural and Physical Sciences covers *mathematical sciences, physics and astronomy, chemical sciences, earth sciences* and *biological sciences.*

Data is also published at NZSCED narrow field, where numbers permit. This allows, for instance, separation of law from economics and from social work and separation of medicine from nursing.

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1. Statistics New Zealand will deliver the final IDI in 2013 and this will replace the IDI prototype. All subsequent references to the IDI in this report are to the IDI prototype. [↑](#footnote-ref-1)
2. The first five years post study is the period over which the graduate’s formal education has the greatest impact. As time goes on, the influence of a qualification is complemented by the effects of the person’s work experience. [↑](#footnote-ref-2)
3. The method used is set out in Scott D (2008) *Trends in fields of study of bachelors degree graduates in New Zealand* Ministry of Education. [↑](#footnote-ref-3)
4. In many occupations that doctoral graduates aspire to – such as scientific researcher – a period overseas as a post-doctoral fellow is a standard part of the career path. Papadopoulos (2012) and Smart (2011) look at this question.. [↑](#footnote-ref-4)
5. The results for ‘all’ graduates include those who completed in every field of study, not just the three fields for which we report disaggregated results. [↑](#footnote-ref-5)
6. Earnings reported in text are rounded to three significant figures. Refer to each table for unrounded earnings. [↑](#footnote-ref-6)
7. This excludes those in industry training and in Youth Guarantee [↑](#footnote-ref-7)
8. For example, 25 years and under for law degrees which are four years long, 26 years and under for architecture degrees which are five years long, and 27 years and under for medical degrees as these are six years long. Qualifications with non-whole numbers of years are rounded to the closest number of whole years (rounding upwards if the length is x and a half years). [↑](#footnote-ref-8)
9. For the structure of NZSCED, refer to: <http://www.educationcounts.govt.nz/data-services/collecting-information/code_sets/new_zealand_standard_classification_of_education_nzsced> [↑](#footnote-ref-9)