

Part 6

Appendices



Glossary

Bachelors or higher degree

The term “bachelors or higher degree” includes bachelors degree, advanced diploma, postgraduate diploma, and masters and doctorate degrees.

Board of trustees

A school’s board of trustees is its governing body, elected by parents and caregivers. Boards establish a charter, which sets out the aims and objectives of the school.

Cognitive skills

Cognitive skills include thinking, reasoning, problem solving, and other intellectual abilities.

Colleges of education

A college of education is a public tertiary education institution (TEI) that provides mainly specialist teacher education training. They also offer professional development for teachers as well as other non-teaching courses such as business, performing arts, sport coaching and science. All of these institutions in New Zealand have now amalgamated with universities.

College of Education	Amalgamated with
Auckland College of Education	University of Auckland
Hamilton College of Education	University of Waikato
Massey University College of Education	Massey University
Wellington College of Education	Victoria University
Christchurch College of Education	University of Canterbury
Dunedin College of Education	University of Otago

Decile

Students from low socio-economic communities face more barriers to learning than students from high socio-economic communities. Schools that draw their roll from low socio-economic communities are given greater funding to combat these barriers. School decile is used to calculate and allocate the additional funding.

Schools are assigned a socio-economic score based on five census-derived socio-economic factors. Schools are then ranked in order of this score and divided into 10 even groups called deciles. The 10 percent of schools with the lowest scores are considered decile 1 schools, the next 10 percent of schools are considered decile 2 schools, and so on. Decile 1 schools have the highest proportion of students from low socio-economic communities, decile 10 schools have the least (Note: this does not mean students from decile 10 schools are ‘rich’).

Deciles are also used in many of the indicators used by the Ministry of Education as a proxy for socio-economic status. These indicators are found on the Education Counts website.

Early leaving exemption

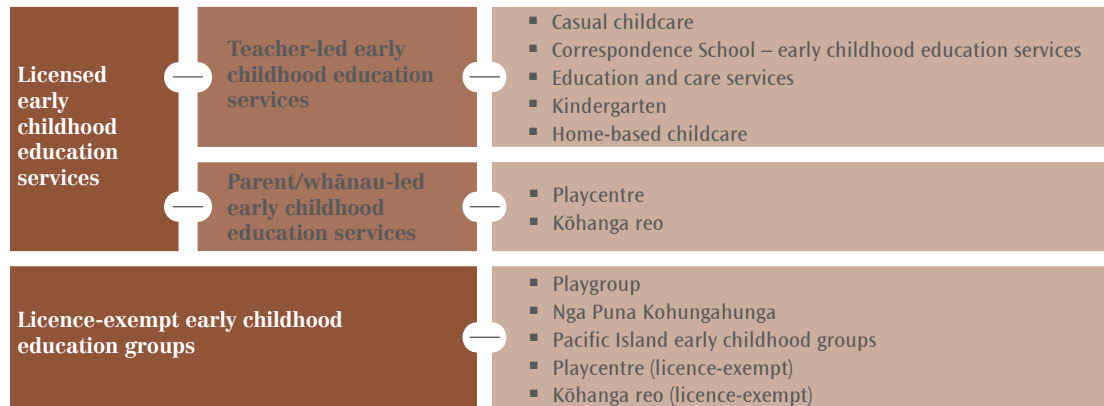
Parents may apply for permission for students to leave school before their sixteenth birthday. The application must be based on the students’ educational problems or conduct, or the estimated benefit of their staying at school. Students granted early leaving exemptions can take up training courses, or enter polytechnics, university, or fulltime employment.

Early Childhood Education (ECE) services

Early childhood education services are services providing education and care for infants and young children before they begin school. The majority of children in early childhood services are under five; however, children may attend early childhood services up to their sixth birthday, when schooling becomes compulsory. Early childhood education services can be provided and organised in a range of ways.



Early Childhood Education service types



Education and care services

Educate and care services provide sessional, all-day, or flexible-hour programmes for children from birth to school age. They may be privately owned, community-based, or operated as an adjunct to a business or organisation. Individual education and care services may be known by many names, including crèches, private kindergartens, aoga, punanga reo, and childcare centres. These services are teacher-led and required to meet the teacher registration targets.

Employment

The official measure of employment is the number of people in work for one hour or more per week.

Equivalent full-time students (EFTS)

EFTS is a unit for counting tertiary student numbers. The basis of the EFTS system is that a student taking a normal year's full-time study counts as 1.0 EFTS unit or the equivalent of 120 credits on the National Qualifications Framework. The courses taken by part-time students are proportions of 1 EFTS unit: for example, 0.75 EFTS.

Exclusion

Students subject to exclusion are not allowed to return to the school they have been excluded from, but must enrol elsewhere. Only students under the age of 16 can be excluded.

Expulsion

Students subject to expulsion are not allowed to return to the school they have been expelled from. They may enrol at another school. Only students aged 16 or over can be expelled from a school.

Formal tertiary education

For the purposes of statistical reporting, a tertiary student is considered to be a formal student when enrolled in a formal programme of study of more than one week's full-time duration (i.e. an equivalent full-time student (EFTS) value greater than 0.03). The programme must lead to a qualification approved by an authorised certifying body or issued by an institution.

Frequent truant

To be classified as a frequent truant, a student must be unjustifiably absent for three or more days during the week of the Ministry of Education two-yearly attendance survey.

Graduate income premium

See **Income premium**.

Home-based childcare services

Home-based childcare services are early childhood services provided to small groups of children in a caregiver/educator's or child's own home. Home-based care services are grouped together in networks, which are supervised by coordinators who are registered teachers.

Household Labour Force Survey (HLFS)

The HLFS is a quarterly survey conducted by Statistics New Zealand to monitor labour force activity in New Zealand.

Income

Income refers to income from all sources – salary, wages, self-employment, and unearned income such as benefits, dividends, and interest.

Income premium

Income premium refers to additional income a group have as a result of higher qualifications: for example, a bachelors degree versus a schooling qualification.





Industry training

Industry training (including the Modern Apprenticeships scheme) is the main workplace learning programme in New Zealand. Industry, via Industry Training Organisations (ITOs), is responsible for setting skill standards and developing training programmes for its learners. Industry training learners have formal training agreements with both their employer and their ITO, which facilitate structured training. Training leads to a nationally recognised qualification on the National Qualifications Framework (NQF). ITOs do not provide training themselves but make arrangements for workplace assessments and off-job delivery of training, such as the purchase of training from a polytechnic or a private training establishment.

Institutes of technology and polytechnics

A public tertiary education institution (TEI) is characterised by a diversity of vocational and professional programmes. They are usually known as polytechnics or institutes of technology.

Kindergartens

Kindergartens are teacher-led early childhood services represented by the New Zealand Kindergartens Inc. or the New Zealand Federation of Free Kindergartens that provide sessional programmes for mainly three- and four-year-old children.

License-exempt early childhood groups

License-exempt early childhood groups are services that have been issued an exemption from licensing requirements in recognition of the fact that more than half of the children attending attend with a parent.

Licensed early childhood services

Licensed early childhood services are any premises used regularly for the education or care of three or more children under the age of six must be licensed, except where specifically exempted by the Minister of Education.

Modern Apprenticeships scheme

Introduced in 2000, the Modern Apprenticeships scheme is a work-based training initiative that encourages and helps young people, particularly those aged between 16 and 21 years, to take up and complete apprenticeship training. For modern apprentices, the NQF qualifications have replaced the trade and advanced trade certificates of the past.

National Certificate of Educational Achievement (NCEA)

NCEA is New Zealand's national qualification on the National Qualification Framework which is based on credits from all unit and achievement standards. NCEA Level 1 replaced School Certificate in 2002 and is usually undertaken by Year

11 students. In 2003 NCEA Level 2, which is usually undertaken by Year 12 students, was introduced. NCEA Level 3 was introduced in 2004 and replaced University Bursaries. NCEA Level 3 is usually undertaken by Year 13 students.

National Education Monitoring Project (NEMP)

NEMP is a solely New Zealand assessment study of Year 4 and Year 8 students, undertaken by the Education Assessment and Research Unit (EARU) of the University of Otago under contract to the Ministry of Education. NEMP measures achievement across all the curriculum areas including reading, writing, and mathematics. Monitoring started in 1995 and runs every year in a four-year cycle across curriculum areas.

New Zealand Income Survey (NZIS)

The NZIS is an annual survey conducted by Statistics New Zealand, which collects information on wages and salaries, self-employment, government transfers and other transfer income, supplementary to the Household Labour Force Survey (HLFS).

New Zealand Teachers' Council (NZTC) registration

New Zealand Teachers' Council (NZTC)-registered teachers include teachers who hold NZTC practising certificates which have NZTC full registration, registration subject to confirmation, or registration that is provisional. Full registered teachers are teachers who have satisfactorily completed two years of teaching in New Zealand in the past five years. Registration subject to confirmation includes experienced teachers from overseas and experienced New Zealand teachers who have taught for less than two of the past five years in New Zealand. Provisional registration is given to beginning teachers (newly graduated teachers who have not been early childhood qualified teachers before).

Organisation for Economic Cooperation and Development (OECD)

The Organisation for Economic Cooperation and Development is an international organisation helping governments tackle the economic, social, and governance challenges of a globalised economy. New Zealand is one of 30 member countries of the OECD.

Playcentres

Playcentres are early childhood services that belong to an association affiliated with the New Zealand Playcentre Federation Inc. A primary characteristic of playcentres is that families manage and implement the education programme. Playcentres may be licensed early childhood education services or licence-exempt early childhood education groups.

Programme for International Student Assessment (PISA)

PISA is an OECD-sponsored study of 15-year-old students which assesses achievement in reading literacy, mathematical literacy, and scientific literacy. The main focus of the assessment changes with each cycle. The major domain of the 2003 cycle was mathematics, with reading literacy and scientific literacy as minor domains. In 2006, the major PISA domain was science, with reading and mathematics as minor domains. PISA assessment focuses on applying knowledge and experience to real world issues, rather than being limited to mastery of specific school curricula.

Progress in International Reading Literacy Study (PIRLS)

PIRLS is a study of Year 5 students. The most recent results are from the 2005/06 cycle. The International Association for the Evaluation of Educational Achievement (IEA) sponsors PIRLS. PIRLS assessment focuses on three aspects of students' reading literacy: process of reading comprehension, purposes of reading, and reading behaviours and attitudes.

Quintile

A school's decile indicates the extent to which the school draws its students from low socio-economic communities. Quintile 1 schools (deciles 1 and 2) are the 20 percent of schools with the highest proportion of students from low socio-economic communities, whereas quintile 5 schools (deciles 9 and 10) are the 20 percent of schools with the lowest proportion of these students.

Retention rate

Retention rate is the proportion of students still enrolled to ages 16.5 and 17.5 years old, beyond the minimum school leaving age of 16.

Stand-down

Students on stand-down are removed from a state school for a specified period. The school principal can decide whether a student should be stood-down and how many days the stand-down will last for. Stand-downs, for any student, can total no more than five school days in any term, or 10 days in a school year. Following a stand-down, the student automatically returns to school.

Suspension

Students who are suspended are not allowed to attend school until the board of trustees decides the outcome at a suspension meeting. The school principal can suspend a student, but the school board decides the next step. The

board may decide to list the suspension with or without conditions, to extend the suspension, or, in the most serious cases, to either exclude or expel the student.

Suspension Reduction Initiative (SRI) / Suspension Engagement Initiative (SEI)

The SRI was established in 2001 to counter the disproportionately high number of Māori suspensions. Its goal is to reduce Māori suspension statistics to the same rate as non-Māori students by 2016, and it is one of a number of initiatives directed towards the underlying goal of improving and sustaining Māori student achievement and retention.

This initiative has since been integrated into the Student Engagement Initiative (SEI), a programme designed to reduce truancy and early leaving exemptions as well as reducing suspensions.

Trends in International Mathematics and Science Study (TIMSS)

TIMSS is a cycle of studies designed to measure trends in mathematics and science achievement, at the middle primary and lower secondary levels, across a large number of countries. The International Association for the Evaluation of Educational Achievement (IEA) sponsors TIMSS. The study has been carried out in New Zealand in 1994, 1998 and 2002.

Unemployment

The official measure of unemployment is the number of people who are not in work, but who are available for and actively seeking work.

University

A university is a public tertiary education institution (TEI) that is primarily concerned with advanced learning and knowledge, research, and teaching to a postgraduate level.

University Entrance

University Entrance qualification is a prerequisite for entrance to university for people who have not attained the age of 20 years. University Entrance requires a minimum of 42 credits at NCEA Level 3 or higher. Within these credits there must be at least 14 credits at Level 3 or higher in two separate subjects from a list of 'approved subjects'. There are also literacy and numeracy requirements. A student must gain at least 14 numeracy credits at Level 1 or higher and eight literacy credits at Level 2 or higher, four in reading and four in writing.



Technical notes

Ethnicity

The term “ethnicity” refers to the ethnic group or groups to which an individual belongs. The concept of ethnicity adopted by the Ministry of Education is a social construct of group affiliation and identity. The Ministry of Education uses the definition of ethnicity used by Statistics New Zealand, namely:

A social group whose members have one or more of the following characteristics:

- they share a sense of common origins,
- they claim a common and distinctive history and destiny,
- they possess one or more dimensions of collective cultural individuality,
- they feel a sense of unique collective solidarity.

Prioritisation of ethnicity is when people are allocated to one of the ethnicities they have recorded that they affiliate with. This usually occurs when data are collected manually and/or aggregate data returns are collected centrally. This allocation is performed using a predetermined order of ethnic groups. The purpose of this prioritisation is to ensure that ethnic groups of policy importance are not swamped by the European/Pākehā ethnic group.

In the early childhood education and schooling sections of this publication, ethnicity is prioritised in the order of Māori, Pasifika, Asian, other groups except European, and European/Pākehā.

Multiple ethnicities are used in the tertiary section of this publication. Multiple ethnicity works by considering each ethnicity a person affiliates with as one data entry. For example, the data relating to an individual who affiliates as both Māori and Pasifika will be included in both categories. This approach can be undertaken in tertiary as most data is collected in a disaggregate fashion.

In this publication, European/Pākehā refers to people who affiliate as New Zealand European, Other European or European (not further defined). For example this includes, but is not limited to, people who consider themselves as Australian (not including Australian Aborigines), British and Irish, American, Spanish, Ukrainian, and Czech.

Part 1 – Early Childhood Education

Chapter 1 – Participation

Enrolment rate –

The number of children attending early childhood education services is collected as at 1 July of each year. The data consists of the total numbers of children in each service, by ethnic group and age. It is not currently possible to identify individual children, so the total number of enrolments contains those children enrolled at more than one service.

The enrolment rate is calculated by taking the total number of enrolments by age group as a proportion of the total population for that age group based on Statistics New Zealand census population projections. Because of the double counting of some children, the enrolment rate is above 100 percent for some age groups.

Prior participation rate –

When children start school, their parents are asked if their child has been regularly attending early childhood education. The rate of participation in early childhood education is calculated as those children attending early childhood education as a proportion of all those children starting school, excluding those whose attendance cannot be determined. This measure eliminates double counting of students that occurs when calculating the enrolment rate. However, no information on the type of service is collected here.

The prior participation rate is essentially the participation rate for four-year-olds, given the age children generally start school in New Zealand.

Chapter 4 – Teaching

Enrolments/students in tertiary early childhood education courses –

Students may enrol in and complete more than one early childhood education tertiary course leading to teacher registration. Therefore enrolments and completion numbers will be slightly higher than the number of students enrolling and graduating. However, the differences between enrolments and students, and completions and graduates, are small.



Part 2 – Schooling

Chapter 5 – Foundation Knowledge

Progress in International Reading Literacy Study (PIRLS) –

Mean PIRLS scores are based on scores generated using Item Response Theory. These scores are reported on an international scale with an international standard deviation of 100 so that approximately two-thirds of all students internationally have scores between 400 and 600.

Trends in International Mathematics and Science Study (TIMSS) –

Mean TIMSS scores for the New Zealand population and sub-populations are based on scores generated using Item Response Theory. These scores are reported on an international scale with an international standard deviation of 100 so that approximately two-thirds of all students internationally have scores between 400 and 600.

Chapter 6 – Student engagement

Stand-down, suspension, exclusions, and expulsions: Interpretation issues –

There was an apparent large increase (greater than 50 percent) in both the stand-down and suspension rates for ‘Other’ ethnic groups between 2000 and 2001, while there was little change from 2001 on. This could be a result of small numbers of students being recorded as ‘Other’ when recording stand-downs and suspensions while, on the school roll, they may appear in one of the larger ethnic groups.

In 2004, 2005, and 2006, for a small number of schools there was an abnormally large increase in the numbers of stand-downs and/or suspensions and/or exclusions and/or expulsions recorded as belonging to ‘Other’ ethnic groups. Investigation of individual records, trends over time for each school and each school’s catchment area indicated a considerable number of records had an ethnic group erroneously coded as ‘Other’. A conservative adjustment was made to the data to correct for this poor coding.

Student Engagement Initiative (SEI) –

The Student Engagement Initiative (SEI, formerly known as the Suspension Reduction Initiative) was introduced in 2001 to help reduce the disproportionately high number of Māori student suspensions, truancies, and early leaving exemptions. The SEI is a long-term initiative being run over 15 years with a goal of reducing Māori suspension rates to those of non-Māori students by 2016.

Secondary schools with high suspension rates for Māori students are invited to participate. Nationally about 80 schools per annum are involved in the SEI, although the actual figure varies as new schools enter and other schools leave.

Funding of \$2.2 million per annum is available to schools. Each school plans what activities it intends to do to reduce suspensions, and what its expected results will be. Once this plan is agreed with the Ministry of Education, the school receives funding to support its initiatives.

Schools employ a wide range of initiatives to reduce suspensions, and usually use a combination of approaches rather than focusing on one. Initiatives range from providing academic support to drug education/intervention programmes and providing personal development for teachers. Restorative processes may be used, mentoring programmes established, or pastoral care networks used. Families/whānau can be involved, as well as the community and external agencies.

Chapter 7 – Participation

Apparent retention rate: interpretation issues –

This measure is calculated from aggregate roll return data which capture the age of the student in whole years. Therefore, a student aged 16 on 1 July, which is the date the data are captured, could be between 16 years and zero days, and 16 years and 364 days. Statistically it is a measure of those who stay at school to age 16.5 years on average. The same issue applies to 17-year-olds.

Because the retention of individual students cannot be tracked over time, the retention rates shown in this chapter are only estimates. The estimates are derived by comparing total enrolments, by ethnic group and so on, for 16.5- and 17.5-year-olds in each year with the total number of enrolments of 14.5-year-olds two and three years earlier respectively. Due to high migratory inflows, enrolments have actually increased, inflating the observed retention rate. Similarly, both positive and negative net migration can affect the results for all groups, but its effects are most pronounced in the Asian population where the apparent retention rates for 16.5- and 17.5-year-olds was 122 percent and 121 percent respectively in 2004. This enrolment increase does not include Ministry of Foreign Affairs and Trade (MFAT) scholarship and foreign fee-paying students, who have been excluded from the analysis.

Early leaving exemptions: interpretation issues –

For all years there were at least seven percent of students for whom no ethnicity code had been recorded. The distribution of cases with ethnicity codes has been applied to the set of students with no ethnicity codes so as to equate numbers by ethnic group with total numbers of cases. For this reason all comparisons by ethnicity should be viewed as estimates only.





The data include students without a 'last school attended'. These students were home-schooled, newly arrived in New Zealand (so had never been to school here) or truant (that is, the student was not enrolled at school when the exemption was granted), with the exemption possibly being with the assistance of the Non-Enrolled Truancy Service (NETS).

Chapter 9 – Knowledge – secondary years

Programme for International Student Assessment (PISA) –

Mean PISA scores for the New Zealand population and sub-populations are based on scores generated using Item Response Theory. These scores are reported on an international scale with an international standard deviation of 100 so that approximately two-thirds of all students internationally have scores between 400 and 600.

Trends in International Mathematics and Science Study (TIMSS) –

Mean TIMSS scores for the New Zealand population and sub-populations are based on scores generated using Item Response Theory. These scores are reported on an international scale with an international standard deviation of 100 so that approximately two-thirds of all students internationally have scores between 400 and 600.

Chapter 10 – School leavers – Qualifications

National Certificate of Educational Achievement (NCEA):

Interpretation issues –

NCEA is part of the National Qualifications Framework and has replaced School Certificate, Sixth Form Certificate, University Entrance and University Bursaries qualifications. In 2002, all schools implemented NCEA Level 1, replacing School Certificate.

In 2003, NCEA Level 2 was introduced. However, schools were still able to offer a transitional Sixth Form Certificate Programme. From 2004, Level 3 NCEA replaced Higher School Certificate, University Entrance, and University Bursaries. In 2004, a new Level 4 qualification, New Zealand Scholarship, was also offered.

The change in qualification structure means that any comparison between current and previous years' data is problematic. The data presented here are one possible means of drawing some comparison. However, when interpreting any changes over time, the disparity between the qualification structures must be taken into account.

Little or no formal attainment, NCEA Level 2 –

The change in qualification structure means that any comparison of the proportion of students with little or no formal attainment between current and previous years is problematic. Previous qualifications, such as School Certificate, were awarded to students if they had completed the assessment and met attendance requirements, independent of the grade awarded.

The new qualification structure, however, is designed to award students credits when they have met achievement rather than participation criteria. These data provide the basis for the graph and are one possible means of drawing some comparison. However, when interpreting any changes over time, the disparity between the qualification structures must be taken into account.

University entrance standard –

Historically a student who had achieved the required prerequisites to go directly to tertiary study at the degree level was awarded the qualification University Entrance. This qualification has essentially been replaced by NCEA Level 3. Because NCEA allows more flexibility for students' courses and more detailed assessments and understanding of what students know from a course of study, it is possible to attain NCEA Level 3 and not have met the required prerequisites for degree-level study, or not attain NCEA Level 3 but have proven to meet the requirements for the degree.

Hence this indicator is about meeting a university entrance standard (which is about being able to attend university to study at the degree-level if desired) rather than attaining a University Entrance qualification or NCEA Level 3.

In 2005, there was no category to identify those attaining 42 to 59 credits at Level 3 or above who also met university entrance standard. Rather, all leavers with 30 to 59 credits at Level 3 or above were grouped together. In order to estimate the number of leavers gaining 42 to 59 credits at Level 3 or above meeting university entrance standard, results for Year 13 to Year 15 candidates from the 2005 National Qualifications Framework data have been used. The proportion of Year 13 to Year 15 candidates gaining 42 to 59 credits at Level 3 or above with university entrance, for each school, ethnic group and gender, has been applied to the corresponding set of leavers with thirty to 59 credits at Level 3 or above, by school, ethnic group and gender. In 2006 the data collected indicated students who attained a university entrance standard.

Part 3 – Tertiary

Changes in tertiary numbers from *State of Education in New Zealand 2006* –

A number of revisions of tertiary data were made during 2007. This has resulted in differences in numbers (and rates) for some tertiary measures between what was shown in *State of Education in New Zealand 2006* and what appears in this report. The two principal reasons for these differences are provided below.

A major review was undertaken of the quality of qualification award category codes (a classification of level of study) and the New Zealand Standard Classification of Education (NZSCED) field of study assigned to qualifications. As a result, a number of qualifications had their level and field of study revised, and between 1,000 and 2,000 enrolments a year were reclassified from type 'D' to type 'C'. Currently only records known as 'Type D' are included in enrolments. These relate to students enrolled in formal qualifications of more than one week's equivalent full-time study. Non-formal enrolments and formal enrolments of a week or less equivalent full-time study are excluded. Hence, those recoded to type 'C' are now out of scope and not included in this year's supply. Many students previously coded to Level 1-3 certificates have now been reclassified as Level 4 certificates, or Level 5-7 diplomas. The change does not affect completions but affects higher-level progression rates.

A major review of individual student identifiers, and the data matching process to assign these, was also undertaken during the year. As part of the tertiary reforms introduced by the government in 2006, there was a need to have better information on the attrition, completion, and progression rates for each individual institution. In addition, there was an apparent discontinuity in system completion and attrition rates using individual student identifiers: before 2003 rates were based on Student Number (SN) as allocated by individual providers; from 2003 onwards, rates were based on National Student Numbers (NSN). Both these factors made it essential that the Ministry of Education review the data matching methodology. The availability of four years of NSN data was able to provide a powerful independent means to measure the accuracy of the matching, and to revise the processes used. The methodology was extensively reviewed in 2007 and SNs were regenerated for all existing enrolments and completions data from 1994 to 2006.

Chapter 12 – Participation

Age-standardised participation rate –

The age-standardised participation rates are standardised

to the national age distribution (i.e. they represent the rate a group would have if they had the same age distribution as the national age distribution).

Chapter 13 – Achievement

Completion rate –

The completion rate is the percentage of students starting courses or qualifications who successfully complete them. Qualification completion rates are often expressed as the percentage completed after five years, while course completion rates generally relate to one year. Qualification completion rates by level include students who complete different qualifications to the ones they started provided the qualifications completed are at the same level as the ones started. Similarly, qualification completion rates by sub-sector can include students who complete qualifications at different providers to the ones they started at, so long as the providers are part of the same sub-sector as the ones they started at.

Due to delays in the provision of 2007 data, completion information was not available for 2007. The information contained in this chapter will be released on the Education Counts website as soon as it is available.

Chapter 15 – Research

Real terms –

Sums quoted in real terms have been adjusted for the effects of inflation over time using the Consumer Price Index.

Statistical matching –

The Ministry of Education uses statistical matching methods to link the enrolment and completion records of students who were enrolled prior to 2003.

Performance-Based Research Fund (PBRF) eligible workforce/staff –

To be eligible to participate in the 2003 quality evaluation, staff had to meet the following criteria:

- EITHER have been employed on the staff census date under an agreement of salaried employment with a duration of at least one year
- OR have been employed on the staff census date by a Tertiary Education Organisation or eligible subsidiary for at least one year under one or more agreements of salaried employment on a continuous basis
- AND have been employed for a minimum of one day a week on average or 0.2 full-time equivalent over the period of the entire year
- AND their employment functions include research and/or teaching degree-level programmes.



Part 4 – Labour market

Chapter 17 – Effect of education on income

Real median income –

This is the weekly median income adjusted for inflation using the Consumer Price Index (CPI) to reflect income in real dollar terms in 2006.

New Zealand Income Survey: Interpretation issues –

The data will contain both sampling and non-sampling errors.

The sampling methodology used by Statistics New Zealand in collecting the data for the Household Labour Force Survey (HLFS) and New Zealand Income Survey (NZIS) can result in the figures for the smaller ethnic groups (Māori and Pasifika) being less stable than for larger groups (European/Pākehā) owing to a larger sampling error. Caution therefore should be exercised in interpreting changes in the data for these smaller groups over time.

Chapter 18 – Graduate income premium

Graduate income premium –

The terms ‘graduate income premium’, ‘graduate earnings premium’, and ‘premium for completion’ are all used to denote the ratio of the mean earnings of those who successfully complete qualifications to the mean earnings of those who study for those qualifications but leave study without having completed them successfully.

It is possible to calculate the premium using the median earnings of each group, rather than the mean. This was the approach used in Hyatt and Smyth (2006). In this analysis the mean was used largely because the privacy protocols governing use of the integrated dataset allow use of the mean in relation to all of the sub-groups that were the focus of this study. Small cell size would prevent use of the median in relation to some of the sub-groups.

The decision to use the mean, rather than the median, results in the measure being subject to distortion due to the mean being affected by extreme observations. This effect is particularly noticeable when comparing men with women. Men’s incomes are more widely dispersed than women’s. Because a disproportionately large share of those with very high incomes are men, the difference between men and women in the earnings premium calculated by means is greater than when the premium is calculated by medians.

For instance, for bachelors degree graduates of the 1997 cohort three years after study, there was a difference in the premiums for men and women of six percentage points when the mean was used. Using the median, the difference in the premium reduced to three percentage points. Five years after study, the difference was 10 percentage points using the mean but only seven using the median.

In other words the use of means, not medians, has the effect of overstating the differences between men and women.

Chapter 19 – Unemployment rates

New Zealand Income Survey (NZIS)/Household Labour Force Survey (HLFS): Interpretation issues –

Data for this indicator were obtained from New Zealand Income sample surveys, and will contain both sampling and non-sampling errors. Sampling error is a measure of the variability that occurs by chance because a sample rather than an entire population is surveyed. Non-sampling errors include errors arising from biases in the patterns of response and non-response, inaccuracies in reporting by respondents (including inaccuracies as a result of proxy interviewing) and errors in the recording and coding of data. The Household Labour Force Survey does not measure the quality of people’s jobs: for example, whether they work in casual jobs, how much they are paid, whether they get sick leave, and so on.

There are also sometimes complaints about the definitions used in the Household Labour Force Survey (that is, to be counted as employed you only have to have worked for one hour or more in a week, or you can work unpaid in a family business. And to be unemployed you have to be available to start a job and be actively seeking work – not just looking in newspapers). Therefore, caution needs to be exercised when interpreting the results for comparing smaller groups with the larger group.

Labour force participation rate –

The labour force participation rate is the proportion of the working-age population that is in the labour force.



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