

2012 Performance-Based Research Fund



Annual Report

May 2014

The Tertiary Education Commission's 2012 Performance-Based Research Fund Annual Report is published online at www.tec.govt.nz/About-us/Publications

www.tec.govt.nz
Follow us on Twitter: @TECNZ

Copyright: Creative Commons



Crown copyright © 2014

Except for the Tertiary Education Commission's logo and the images, this copyright work is licensed under the Creative Commons Attribution 3.0 New Zealand licence. In essence, you are free to copy, distribute and adapt the work, as long as you attribute the work to the Tertiary Education Commission and abide by the other licence terms. In your attribution, use the wording 'Tertiary Education Commission' and not the Tertiary Education Commission logo or the New Zealand Government logo.

Table of contents

List of tables	2
Introduction and contents	3
Content of this report	3
Chapter outline	3
Chapter 1: Overview	4
Introduction	4
Applying the funding formulae	5
2012 final funding allocations	5
High-level comparison of final funding allocations for 2011 and 2012	8
High-level comparison of indicative versus final funding for 2012	9
2013 funding allocations – by measures	10
High-level comparison of indicative funding for 2013 with final funding for 2012	11
Chapter 2: The Quality Evaluation measure	14
Funding formula for the Quality Evaluation measure	14
Quality categories	14
Funding weighting for subject areas	15
Full-time equivalent status of staff	15
Quality Evaluation funding allocations for 2011, 2012, and 2013	15
Chapter 3: External research income	19
Funding formula for the external research income measure	19
External research income declared for the 2012 funding calculation	20
External research income declared for 2013 indicative funding calculations	21
Chapter 4: Research degree completions	26
Funding formula and allocations	26
Research Degree Completions funding allocations for 2011, 2012, and 2013	28
Research degree completions by ethnicity	31
Research degree completions by TEO, 2008 to 2011	32
Research degree completions by broad field of study and subject-area weighting, 2008 to 2011	34

List of tables

Table 1.1: Final 2012 PBRF funding allocations – by measures	5
Table 1.2: Final 2011 and final 2012 funding allocations – totals	8
Table 1.3: Indicative and final funding allocations for 2012	9
Table 1.4: Indicative 2013 funding allocations – by measures	10
Table 1.5: Indicative 2013 funding compared to final 2012 funding – totals	11
Table 2.1: Quality category weighting	14
Table 2.2: Subject area weightings	15
Table 2.3: Final 2011 and final 2012 funding allocations – QE measure	16
Table 2.4: Indicative 2013 funding compared to final 2012 funding – QE measure	17
Table 3.1: External research income 2008 to 2010	20
Table 3.2: External research income 2009 to 2011	21
Table 3.3: Final 2011 and final 2012 funding allocations – ERI measure	23
Table 3.4: Indicative 2013 funding compared to final 2012 funding – ERI measure	24
Table 4.1: Cost weighting	26
Table 4.2: Equity weighting	27
Table 4.3: Research component weighting	27
Table 4.4: Final 2011 and final 2012 funding allocations – RDC measure	28
Table 4.5: Indicative and final RDC funding allocations for 2012 – RDC measure	29
Table 4.6: Indicative 2013 funding compared to final 2012 funding – RDC measure	30
Table 4.7: Research degree completions by ethnicity, 2008 to 2011	31
Table 4.8: RDCs by NQF/NZQF grouping with change between years, 2008 to 2011	32
Table 4.9: Aggregated RDC types by broad field of study and TEO, 2008 to 2011	34
Table 4.10: Doctoral completions by subject weighting and broad NZSCED, 2008 to 2011	37
Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011	39
Table 4.12: Postgraduate Diplomas and Honours completions by subject weighting and broad NZSCED, 2008 to 2011	45

Introduction and contents

Content of this report

The *2012 Performance-Based Research Fund Annual Report* provides information about how each participating tertiary education organisation (TEO) performed against the three PBRF measures in the 2012 calendar year.

It sets out the final funding allocations for 2012 and the indicative funding allocations for 2013. Further analysis can be drawn if these figures are compared with previous years.

This report also supplies results for the research degree completions (RDC) and external research income (ERI) measures, incorporating data from the years 2008 to 2011 and additional information on subject area weightings.

Chapter outline

Chapter one describes how the Performance-Based Research Fund (PBRF) funding process works, and gives a brief overview of funding for 2012 and 2013.

Chapter two outlines the Quality Evaluation (QE) measure.

Chapter three outlines the ERI measure.

Chapter four outlines the RDC measure and also contains supplementary data and analysis on RDC counts over both the 2012 final funding and 2013 indicative funding periods.

Chapter 1: Overview

Introduction

Fund background

- 1.1 The Tertiary Education Commission Te Amorangi Mātauranga Matua (TEC) manages the PBRF which has the primary goal of encouraging and rewarding excellent research in New Zealand's tertiary education sector. This involves assessing the quality of research carried out by New Zealand-based degree-granting TEOs – and their wholly-owned subsidiaries – and funding them on the basis of their research performance.
- 1.2 The PBRF considers the quality of research carried out by researchers working at participating TEOs, rather than the quantity of research outputs or the particular nature of the research as such. The purpose of the PBRF is not to provide funding for research projects, but to reward research excellence and support TEOs to provide an environment that produces high quality research. One of the key reasons for taking this approach is to ensure that degree and postgraduate-level teaching is underpinned by high quality research activities.
- 1.3 The PBRF has grown since its introduction in 2003 to \$250 million per year in 2012.¹ The original funding that allowed for the creation of the PBRF came from existing Vote Education research funding paid as a top-up to Student Component Funding to support the delivery of postgraduate courses. A decision was made through Budget 2012 to increase the fund to \$300 million per annum by 2016.

Participants

- 1.4 In 2011 and 2012, A total of 27 TEOs participated in the measures that form the PBRF. These participants include all eight of New Zealand's universities; ten of the 17 eligible institutes of technology and polytechnics (ITPs); two of the three eligible wānanga; and seven of the 17 eligible private training establishments (PTEs).

Components

- 1.5 The PBRF has three components:
 - a periodic QE measure;
 - a RDC measure; and
 - an ERI measure.
- 1.6 In the PBRF funding formulae, these three components are weighted 60 percent, 25 percent, and 15 percent respectively.
- 1.7 For each of the components, a provider's share of funding is determined by its performance relative to other participating TEOs. QEs were held in 2003, 2006, and 2012. The 2006 evaluation set TEOs' QE ratios until the end of 2012, with the 2012 evaluation then setting ratios for 2013 onwards. The RDC and ERI measures are calculated annually using weighted three-year rolling averages.

¹ Unless otherwise specified, all funding figures in this report are GST exclusive and by calendar year.

The 2012 Quality Evaluation and beyond

- 1.8 The results of the 2012 QE were published in October 2013. The report shows an overall increase in research quality, with 15.8 percent growth in the number of funded evidence portfolios (up by 861.81) on 2006 levels and proportionally more PBRF-eligible staff assigned an “A” or a “B” – 53.3 percent in 2012, compared with 48.9 percent in 2006. Detailed analysis of results can be found on the TEC website.²
- 1.9 The PBRF was reviewed following both the 2003 and 2006 QE rounds. A further review, undertaken by the Ministry of Education, concluded in September 2013 and included findings on the extent to which the PBRF has achieved its longer-term aims. Recommendations were made to Cabinet and these were agreed in February 2014. Further information can be found on the Ministry of Education’s website.³ A Sector Reference Group has been convened to provide advice on the 2018 QE.

Applying the funding formulae

- 1.10 Indicative PBRF funding allocations are made before the funding year starts, usually around November. These indicative allocations are based on TEOs’ performance against each of the three PBRF measures and on the funding pool size. Performance is measured using the most up-to-date information available for each measure at the time funding is calculated.
- 1.11 Participating TEOs receive monthly PBRF payments through the tertiary education funding system. A final wash-up funding adjustment for each year is then made in the following year. This is based on final information received from TEOs and takes into account any changes in a TEO’s overall PBRF entitlement. Wash-up adjustments may be credits or debits.
- 1.12 The amount of a TEO’s final PBRF entitlement may differ from its indicative allocation due to a range of factors which can include:
- variances in the size of the PBRF pool between the indicative allocation and the wash-up;
 - a TEO leaving the PBRF during the course of a year by ceasing operation or changing course offerings, which may increase the value of each remaining TEO’s share;
 - errors found in PBRF data as a result of checks which, when corrected, may result in an increase or a decrease in the share of a TEO (with a corresponding adjustment for other TEOs); and
 - the overall number of RDC or amount of ERI increasing or decreasing, affecting the proportion of funding available to each TEO.

2012 final funding allocations

- 1.13 A total of \$250 million in PBRF funding was available in 2012 and allocated as shown in Table 1.1 below.

Table 1.1: Final 2012 PBRF funding allocations – by measures

TEO	Quality Evaluation	External Research Income	Research Degree Completion	Total Funding
University of Auckland	\$40,525,364	\$13,817,320	\$20,021,776	\$74,364,460
University of Otago	\$33,636,984	\$8,267,427	\$10,565,142	\$52,469,553
Massey University	\$21,833,456	\$4,975,401	\$7,636,798	\$34,445,655
University of Canterbury	\$15,896,278	\$2,757,902	\$7,255,801	\$25,909,981
Victoria University of Wellington	\$14,600,714	\$2,970,948	\$6,034,751	\$23,606,413

2 [http://www.tec.govt.nz/Documents/Reports and other documents/PBRF QE 2012 Final Report.pdf](http://www.tec.govt.nz/Documents/Reports%20and%20other%20documents/PBRF%20QE%202012%20Final%20Report.pdf)

3 <http://www.minedu.govt.nz/NZEducation/EducationPolicies/TertiaryEducation/PolicyAndStrategy/PBRFChanges.aspx>

Table 1.1: Final 2012 PBRF funding allocations – by measures – continued

TEO	Quality Evaluation	External Research Income	Research Degree Completion	Total Funding
University of Waikato	\$9,568,154	\$1,776,951	\$4,137,787	\$15,482,892
Lincoln University	\$4,679,326	\$2,035,199	\$1,958,441	\$8,672,966
Auckland University of Technology	\$4,108,163	\$608,199	\$3,192,820	\$7,909,182
Unitec New Zealand	\$2,331,493	\$59,177	\$924,740	\$3,315,410
Otago Polytechnic	\$500,849	\$77,730	\$123,816	\$702,395
Waikato Institute of Technology	\$346,099	\$9,595	\$252,407	\$608,101
Manukau Institute of Technology	\$496,857	\$14,185	-	\$511,042
Christchurch Polytechnic Institute of Technology	\$376,118	\$20,268	-	\$396,386
Te Whare Wānanga o Awanuiārangi	\$199,482	\$57,431	\$117,052	\$373,965
Eastern Institute of Technology	\$159,704	\$22,221	\$62,803	\$244,728
Open Polytechnic of New Zealand	\$174,787	\$5,342	-	\$180,129
Te Wānanga o Aotearoa	\$162,661	-	-	\$162,661
Whitecliffe College of Arts and Design	\$42,883	-	\$169,111	\$211,994
Nelson Marlborough Institute of Technology	\$85,360	-	-	\$85,360
Whitireia Community Polytechnic	\$63,586	\$14,529	-	\$78,115
Laidlaw College	\$25,878	-	\$46,754	\$72,632
Northland Polytechnic	\$54,566	\$2,255	-	\$56,821
Carey Baptist College	\$51,756	-	-	\$51,756
Bethlehem Institute of Education	\$22,181	\$7,920	-	\$30,101
ALS St Helens	\$22,181	-	-	\$22,181
Good Shepherd College	\$22,181	-	-	\$22,181
Anamata	\$12,939	-	-	\$12,939
Total	\$150,000,000	\$37,500,000	\$62,500,000	\$250,000,000

1.14 All 27 PBRF-participating TEOs received funding through the QE measure in 2012. A total of \$150 million of PBRF funding was allocated across TEOs in 2012 based on 2006 QE scores.

1.15 For 2012, 19 providers were eligible to receive their share of \$37.5 million in ERI funding, based on a weighted average derived from their 2008 to 2010 performance.

1.16 Also based on performance in 2008 to 2010, a total of \$62.5 million in RDC funding was available for allocation to 15 TEOs in 2012.

Universities

1.17 Together, New Zealand's eight universities received 97.14 percent of the final PBRF funding in 2012.

1.18 In 2012, as in 2011, the University of Auckland and the University of Otago together received slightly more than 50 percent of the total available funding. There were nevertheless distinct differences in the relative strengths of these two highest performing universities in the PBRF.

- 1.19 Of all participating TEOs, the University of Auckland received the greatest share of the total QE allocation. However, in terms of its overall PBRF funding it received proportionately less from this measure than the University of Otago. The proportion of total funding made up by the QE component was 64.11 percent for the University of Otago, and 54.50 percent for the University of Auckland.
- 1.20 Conversely, the University of Auckland generated significantly higher proportions of funding from the two other components. RDC and ERI funding respectively made up 26.92 and 18.58 percent of its total allocation, while these same measures accounted for 20.14 and 15.76 percent of the University of Otago's overall PBRF funding.

ITP sector

- 1.21 In 2012, the ITP sector received 2.47 percent of the total PBRF funding. As in 2011, the performance-based distribution of this \$6.18 million was highly variable between TEOs.
- 1.22 Unitec New Zealand alone received 53.66 percent of the entire PBRF funds allocated to the ITP sector – a total of \$3.32 million and an increase of 6.39 percent from 2011. Otago Polytechnic had the second highest total PBRF allocation of the ITPs, with \$702,395.
- 1.23 While the QE component accounted for the majority of each ITP's total PBRF allocation, the proportion of individual providers' funding made up of this measure ranged widely, from 56.91 percent at Waikato Institute of Technology to 100 percent at Nelson Marlborough Institute of Technology.
- 1.24 Whitireia Community Polytechnic and Otago Polytechnic received the highest proportion of ERI funding as a proportion of their total funding with 18.60 percent and 11.07 percent respectively.
- 1.25 Allocations for RDCs were paid to four ITPs, and in each case this measure was a significant source of revenue. Waikato Institute of Technology received the highest proportion of RDC as a percentage of its total PBRF funding at 41.51 percent or \$252,407 and Unitec New Zealand received the highest dollar amount of RDC funding for the ITP sector with \$924,740, representing 27.89 percent of its total PBRF total funding.

Wānanga and PTE sectors

- 1.26 The wānanga and PTE sectors respectively received 0.21 and 0.17 percent of the total PBRF fund in 2012.
- 1.27 For almost all of these provider types, the largest proportion of their final 2012 PBRF funding came from the QE measure, with four of the seven participating PTEs receiving 100 percent of their funding from this component. Exceptions to this rule were Whitecliffe College of Arts and Design and Laidlaw College, the only PTEs to receive RDC funding from which they were allocated 79.77 percent and 64.37 percent of their total PBRF funding respectively.
- 1.28 Bethlehem Institute of Education was the only PTE to receive ERI funding (\$7,920), which accounted for 26.31 percent of its total PBRF funding.
- 1.29 Of the two participating wānanga, Te Whare Wānanga o Awanuiārangī produced the strongest performance, attracting funding from all three measures to make up its total \$373,965 for 2012 (an increase of 35.54 percent on its 2011 funding), of which 53.34 percent was from QE, 15.36 percent was from ERI, and 31.30 percent was from RDC. Conversely, Te Wānanga o Aotearoa's lesser PBRF funding was derived entirely from the institution's 2006-based performance in the QE.

High-level comparison of final funding allocations for 2011 and 2012

Table 1.2: Final 2011 and final 2012 funding allocations – totals

TEO	Total Funding 2011	Total Funding 2012	Change (\$)	Change (%)
University of Auckland	\$73,971,632	\$74,364,460	\$392,828	0.53%
University of Otago	\$52,529,142	\$52,469,553	-\$59,589	-0.11%
Massey University	\$34,670,581	\$34,445,655	-\$224,926	-0.65%
University of Canterbury	\$27,146,107	\$25,909,981	-\$1,236,126	-4.55%
Victoria University of Wellington	\$23,093,824	\$23,606,413	\$512,589	2.22%
University of Waikato	\$15,373,586	\$15,482,892	\$109,306	0.71%
Lincoln University	\$8,483,525	\$8,672,966	\$189,441	2.23%
Auckland University of Technology	\$8,038,240	\$7,909,182	-\$129,058	-1.61%
Unitec New Zealand	\$3,116,282	\$3,315,410	\$199,128	6.39%
Otago Polytechnic	\$678,916	\$702,395	\$23,479	3.46%
Waikato Institute of Technology	\$577,682	\$608,101	\$30,419	5.27%
Manukau Institute of Technology	\$509,338	\$511,042	\$1,704	0.33%
Christchurch Polytechnic Institute of Technology	\$403,389	\$396,386	-\$7,003	-1.74%
Te Whare Wānanga o Awanuiārangi	\$275,905	\$373,965	\$98,060	35.54%
Eastern Institute of Technology	\$218,051	\$244,728	\$26,677	12.23%
Open Polytechnic of New Zealand	\$178,525	\$180,129	\$1,604	0.90%
Te Wānanga o Aotearoa	\$162,661	\$162,661	-	0.00%
Whitecliffe College of Arts and Design	\$158,158	\$211,994	\$53,836	34.04%
Nelson Marlborough Institute of Technology	\$85,360	\$85,360	-	0.00%
Whitireia Community Polytechnic	\$70,273	\$78,115	\$7,842	11.16%
Laidlaw College	\$61,040	\$72,632	\$11,592	18.99%
Northland Polytechnic	\$59,737	\$56,821	-\$2,916	-4.88%
Carey Baptist College	\$51,853	\$51,756	-\$97	-0.19%
Bethlehem Institute of Education	\$28,891	\$30,101	\$1,210	4.19%
ALS St Helens	\$22,181	\$22,181	-	0.00%
Good Shepherd College	\$22,181	\$22,181	-	0.00%
Anamata	\$12,939	\$12,939	-	0.00%
Total	\$250,000,000	\$250,000,000	\$0	0.00%

1.30 The total amount of PBRF funding allocated for 2012 remained the same as 2011, as did the total funding for each measure.

1.31 Most providers nevertheless saw changes to their funding between the two years. Changes varied across the university sector with four universities receiving increased allocations and four seeing decreases. The most notable shifts in the university sector occurred at the University of Canterbury, which underwent a 4.55 percent decrease in its total PBRF funding (down \$1.2 million) between 2011 and 2012; and Victoria University of Wellington which received an increase in its allocation of 2.22 percent (\$512,589).

The most significant changes across the other sectors were increased allocations for Unitec New Zealand and Te Whare Wānanga o Awanuiārangi of 6.39 percent (\$199,128) and \$98,060 (35.54 percent) respectively.

High-level comparison of indicative versus final funding for 2012

Table 1.3: Indicative and final funding allocations for 2012

TEO	Total Indicative Funding 2012	Total Final Funding 2012	Change(\$)	Change(%)
University of Auckland	\$74,623,934	\$74,364,460	-\$259,474	-0.35%
University of Otago	\$52,554,411	\$52,469,553	-\$84,858	-0.16%
Massey University	\$34,433,857	\$34,445,655	\$11,798	0.03%
University of Canterbury	\$25,979,180	\$25,909,981	-\$69,199	-0.27%
Victoria University of Wellington	\$23,715,412	\$23,606,413	-\$108,999	-0.46%
University of Waikato	\$15,488,855	\$15,482,892	-\$5,963	-0.04%
Lincoln University	\$8,695,775	\$8,672,966	-\$22,809	-0.26%
Auckland University of Technology	\$7,478,862	\$7,909,182	\$430,320	5.75%
Unitec New Zealand	\$3,334,420	\$3,315,410	-\$19,010	-0.57%
Otago Polytechnic	\$691,079	\$702,395	\$11,316	1.64%
Waikato Institute of Technology	\$611,944	\$608,101	-\$3,843	-0.63%
Manukau Institute of Technology	\$511,042	\$511,042	-	-
Christchurch Polytechnic Institute of Technology	\$396,386	\$396,386	-	-
Te Whare Wānanga o Awanuiārangi	\$331,913	\$373,965	\$42,052	12.67%
Eastern Institute of Technology	\$213,175	\$244,728	\$31,553	14.80%
Open Polytechnic of New Zealand	\$180,129	\$180,129	-	-
Te Wānanga o Aotearoa	\$162,661	\$162,661	-	-
Whitecliffe College of Arts and Design	\$180,383	\$211,994	\$31,611	17.52%
Nelson Marlborough Institute of Technology	\$85,360	\$85,360	-	-
Whitireia Community Polytechnic	\$78,115	\$78,115	-	-
Laidlaw College	\$57,128	\$72,632	\$15,504	27.14%
Northland Polytechnic	\$56,821	\$56,821	-	-
Carey Baptist College	\$51,756	\$51,756	-	-
Bethlehem Institute of Education	\$30,101	\$30,101	-	-

Table 1.3: Indicative and final funding allocations for 2012 – continued

TEO	Total Indicative Funding 2012	Total Final Funding 2012	Change(\$)	Change(%)
AIS St Helens	\$22,181	\$22,181	-	-
Good Shepherd College	\$22,181	\$22,181	-	-
Anamata	\$12,939	\$12,939	-	-
Total	\$250,000,000	\$250,000,000	-	0.00%

1.32 After the wash-up for 2012, the final funding totalled across all three measures remained the same as the indicative amount (\$250 million).

1.33 In dollar terms, the largest difference between indicative and final funding for 2012 was Auckland University of Technology's increase of \$430,320 (5.75 percent).

1.34 Whitecliffe College of Arts and Design and Laidlaw College experienced the largest percentage change between indicative and final funding, up 17.52 percent and 27.14 percent respectively (albeit relatively small rises in monetary terms given their low baselines). These rises reflect improved performance in their RDCs.

2013 funding allocations – by measures

1.35 As shown in Table 1.4, a total of \$262.5 million of indicative PBRF funding was allocated for the 2013 funding year, an increase of \$12.5 million (5 percent) from 2012.

Table 1.4: Indicative 2013 funding allocations – by measures

TEO	Quality Evaluation	External Research Income	Research Degree Completion	Total Funding
University of Auckland	\$44,575,334	\$14,137,948	\$21,773,223	\$80,486,506
University of Otago	\$33,651,594	\$8,706,561	\$11,115,785	\$53,473,940
Massey University	\$22,062,671	\$5,259,164	\$7,070,970	\$34,392,804
Victoria University of Wellington	\$16,153,911	\$3,210,310	\$7,611,273	\$26,975,493
University of Canterbury	\$15,344,000	\$2,720,364	\$6,571,582	\$24,635,946
University of Waikato	\$8,554,632	\$1,918,626	\$4,435,671	\$14,908,929
Auckland University of Technology	\$7,664,248	\$761,133	\$3,499,414	\$11,924,794
Lincoln University	\$4,284,345	\$2,295,963	\$2,128,136	\$8,708,444
Unitec New Zealand	\$1,946,217	\$31,625	\$695,677	\$2,673,518
Otago Polytechnic	\$794,250	\$102,407	\$213,878	\$1,110,535
Waikato Institute of Technology	\$263,141	\$7,382	\$250,586	\$521,109
Eastern Institute of Technology	\$433,934	\$21,439	\$39,895	\$495,268
Christchurch Polytechnic Institute of Technology	\$431,912	\$18,441	-	\$450,353
Manukau Institute of Technology	\$355,303	\$12,495	-	\$367,798
Te Whare Wānanga o Awanuiārangi	\$138,476	\$83,677	\$95,914	\$318,066
Whitecliffe College of Arts and Design	\$136,734	-	\$94,320	\$231,054

Table 1.4: Indicative 2013 funding allocations – by measures – continued

TEO	Quality Evaluation	External Research Income	Research Degree Completion	Total Funding
Whitireia Community Polytechnic	\$146,812	\$20,582	-	\$167,394
Wellington Institute of Technology	\$110,855	\$38,472	-	\$149,327
Open Polytechnic of New Zealand	\$139,347	\$9,592	-	\$148,939
Laidlaw College	\$64,697	-	\$28,678	\$93,375
Northland Polytechnic	\$90,202	\$347	-	\$90,549
Carey Baptist College	\$46,656	-	-	\$46,656
AIS St Helens	\$36,081	-	-	\$36,081
New Zealand College of Chiropractic	\$24,883	\$6,878	-	\$31,761
Bethlehem Institute of Education	\$18,662	\$11,595	-	\$30,257
New Zealand Tertiary College	\$18,662	-	-	\$18,662
Good Shepherd College	\$12,442	-	-	\$12,442
Total	\$157,500,000	\$39,375,000	\$65,625,000	\$262,500,000

- 1.36 The indicative 2013 QE allocations for all 27 PBRF-participating TEOs were based on scores from the 2012 assessment. The pool for this measure notably rose to \$157.5 million, an overall increase of \$7.5 million from 2012.
- 1.37 For 2013, \$39.4 million was available for the ERI indicative funding allocations which were based on a weighted average resulting from 2009 to 2011 performance.
- 1.38 A total \$65.6 million was available for RDC indicative allocations for 2013, based on 2008 to 2010 performance. Fifteen TEOs were eligible to receive this indicative RDC funding for 2013.

High-level comparison of indicative funding for 2013 with final funding for 2012

- 1.39 Table 1.5 compares 2012 final and 2013 indicative funding allocations and reveals a range of changes across TEOs, reflecting both the shift in distribution from their performance in the 2012 QE and the increased amount of total funding available. These changes are discussed more fully in chapter two.

Table 1.5: Indicative 2013 funding compared to final 2012 funding – totals

TEO	Total Final Funding 2012	Total Indicative Funding 2013	Change(\$)	Change(%)
University of Auckland	\$74,364,460	\$80,486,506	\$6,122,045	8.23%
University of Otago	\$52,469,553	\$53,473,940	\$1,004,387	1.91%
Massey University	\$34,445,655	\$34,392,804	-\$52,851	-0.15%
University of Canterbury	\$25,909,981	\$24,635,946	-\$1,274,034	-4.92%
Victoria University of Wellington	\$23,606,413	\$26,975,493	\$3,369,080	14.27%
University of Waikato	\$15,482,892	\$14,908,929	-\$573,963	-3.71%
Lincoln University	\$8,672,966	\$8,708,444	\$35,478	0.41%
Auckland University of Technology	\$7,909,182	\$11,924,794	\$4,015,612	50.77%

Table 1.5: Indicative 2013 funding compared to final 2012 funding – totals – continued

TEO	Total Final Funding 2012	Total Indicative Funding 2013	Change(\$)	Change(%)
Unitec New Zealand	\$3,315,410	\$2,673,518	-\$641,892	-19.36%
Otago Polytechnic	\$702,395	\$1,110,535	\$408,140	58.11%
Waikato Institute of Technology	\$608,101	\$521,109	-\$86,992	-14.31%
Manukau Institute of Technology	\$511,042	\$367,798	-\$143,244	-28.03%
Christchurch Polytechnic Institute of Technology	\$396,386	\$450,353	\$53,967	13.61%
Te Whare Wānanga o Awanuiārangi	\$373,965	\$318,066	-\$55,899	-14.95%
Eastern Institute of Technology	\$244,728	\$495,268	\$250,539	102.37%
Whitecliffe College of Arts and Design	\$211,994	\$231,054	\$19,060	8.99%
Open Polytechnic of New Zealand	\$180,129	\$148,939	-\$31,190	-17.32%
Te Wānanga o Aotearoa	\$162,661	-	-\$162,661	-100.00%
Nelson Marlborough Institute of Technology	\$85,360	-	-\$85,360	-100.00%
Whitireia Community Polytechnic	\$78,115	\$167,394	\$89,279	114.29%
Laidlaw College	\$72,632	\$93,375	\$20,743	28.56%
Northland Polytechnic	\$56,821	\$90,549	\$33,728	59.36%
Carey Baptist College	\$51,756	\$46,656	-\$5,100	-9.85%
Bethlehem Institute of Education	\$30,101	\$30,257	\$156	0.52%
AIS St Helens	\$22,181	\$36,081	\$13,900	62.67%
Good Shepherd College	\$22,181	\$12,442	-\$9,739	-43.91%
Anamata	\$12,939	-	-\$12,939	-100.00%
Wellington Institute of Technology	-	\$149,327	\$149,327	100.00%
New Zealand College of Chiropractic	-	\$31,761	\$31,761	100.00%
New Zealand Tertiary College	-	\$18,662	\$18,662	100.00%
Total	\$250,000,000	\$262,500,000	\$12,500,000	5.00%

Universities

- 1.40 Three universities saw reductions between their 2012 final and 2013 indicative allocations. The University of Canterbury experienced the largest decrease, falling by 4.92 percent or \$1.27 million (including a \$552,278 decrease in QE funding).
- 1.41 Auckland University of Technology experienced the most significant percentage increase, up 50.77 percent or \$4.02 million on its final 2012 allocation, largely due to a rise in QE funding of \$3.56 million. Significant dollar increases in indicative funding were also seen by the University of Auckland (\$6.12 million) and Victoria University of Wellington (\$3.37 million), again reflecting sizeable gains through the 2012 QE (\$4.05 million and \$1.55 million respectively).

ITP sector

- 1.42 Taken as a whole, indicative 2013 funding for the ITP sector dropped slightly, down by 0.06 percent on its total final allocations for 2012. While this was a marginal decrease overall, some providers experienced significant changes.
- 1.43 Whitireia Community Polytechnic and the Eastern Institute of Technology saw gains of 114.29 percent (\$89,279) and 102.37 percent (\$250,539) respectively, due almost entirely to increases in QE funding. Wellington Institute of Technology notably participated in the PBRF for the first time and received an indicative allocation of \$149,327 for 2013, while Nelson Marlborough Institute of Technology lost its previous QE funding (\$85,360) as it did not participate in the 2012 QE.

Other TEOs

- 1.44 Across wānanga and PTEs, the most notable changes between 2012 final and 2013 indicative funding related to participation – or lack thereof – in the 2012 QE: for 2013, Te Wānanga o Aotearoa and Anamata lost their previous entitlement to a PBRF allocation, while New Zealand College of Chiropractic and New Zealand Tertiary College each received a PBRF allocation for the first time.

Chapter 2: The Quality Evaluation measure

Introduction

- 2.1 The QE measure accounts for 60 percent of the total funds allocated through the PBRF each year. The QE process uses expert peer-review panels to assess research quality, based on material contained in individual researchers' Evidence Portfolios (EPs). QEs were held in 2003, 2006, and 2012, with the scores from 2006 used for the 2012 funding calculation.
- 2.2 The final report on the 2012 QE provides a refreshed picture of the quality and strengths of research in the sector. This 2012 performance data notably updates the ratios for the allocation of the QE measure for the 2013 indicative allocation onwards. Information on the 2012 QE is available on the TEC website.⁴
- 2.3 Funding in relation to the QE is based on:
- quality categories assigned to EPs;
 - funding weightings for the subject area to which EPs have been assigned; and
 - Full-Time Equivalent (FTE) status of PBRF-eligible staff as at the date of the PBRF Census.

Funding formula for the Quality Evaluation measure

- 2.4 The funding formula for the proportion of the quality measure allocated to each TEO is:

$$\frac{\sum \text{TEO [(numerical quality score) x (funding weighting for relevant subject area) x (FTE status of researcher)]}}{\sum \text{all TEOs [(numerical quality score) x (funding weighting for relevant subject area) x (FTE status of researcher)]}} \times \text{X total amount of funding available for the Quality Evaluation component of the PBRF}$$

Quality categories

- 2.5 The quality categories assigned to staff members' EPs have numerical weightings known as quality weightings, as set out below in Table 2.1 (where "NE" signifies new and emerging researcher, and "R" denotes research activity or quality at an insufficient level for the PBRF).

Table 2.1: Quality category weighting

Quality Category	Quality Weighting
A	5
B	3
C	1
C(NE)	1
R	0
R(NE)	0

⁴ <http://www.tec.govt.nz/Funding/Fund-finder/Performance-Based-Research-Fund-PBRF-/quality-evaluation/>

Funding weighting for subject areas

2.6 The subject area weightings, as set out in Table 2.2 below, are intended to reflect the relative cost of research in each EP's primary subject area.

Table 2.2: Subject area weightings

Subject Areas	Funding Category	Weighting
Māori knowledge and development; law; history, history of art, classics and curatorial studies; English language and literature; foreign languages and linguistics; philosophy; religious studies and theology; political science, international relations and public policy; human geography; sociology, social policy, social work, criminology, and gender studies; anthropology and archaeology; communications, journalism, and media studies; education; pure and applied mathematics; statistics; management, human resources, industrial relations, international business, and other business; accounting and finance; marketing and tourism; and economics.	A,I,J	1
Psychology; chemistry; physics; earth sciences; molecular, cellular and whole organism biology; ecology, evolution and behaviour; computer science, information technology, information sciences; nursing; sport and exercise science; other health studies (including rehabilitation therapies); music, literary arts and other arts; visual arts and crafts; theatre and dance, film and television and multimedia; and design.	B,L	2
Engineering and technology; agriculture and other applied biological sciences; architecture, planning, surveying; biomedical; clinical medicine; pharmacy; public health; veterinary studies and large animal science; and dentistry.	C,G,H,M,Q	2.5

Full-time equivalent status of staff

2.7 Funding is allocated in proportion to FTE status as supplied by TEOs in the PBRF Census: Staffing Return. FTE calculations for the funding allocations covered by this report included four particular considerations:⁵

- When staff members were concurrently employed at two TEOs during the year before the census date of 14 June 2012, they generated an FTE entitlement for each organisation based on their FTE status in their employment agreement with each TEO.
- For most staff, the FTE that applied was the FTE status in the week of 11 June 2012 to 14 June 2012. However, if staff had changed their employment status within the TEO during the previous 12 months, their FTE status was their average FTE over the period (for example six months at 0.5 FTE and six months at 1 FTE = 0.75 FTE).
- When a staff member started employment in the 12-month period before the census and was not previously employed by a participating TEO, then – providing they have an employment agreement of one year or more – their FTE status was as their employment agreement stated it to be at the census.
- When a staff member left one participating TEO to take up a position in another participating TEO in the 12 months before the census, both TEOs had a proportional FTE entitlement.

Quality Evaluation funding allocations for 2011, 2012, and 2013

2.8 This section provides comparative analysis of QE financials between years. The 2006 QE fixed TEOs' relative performance and ratios for this measure until the end of 2012. This means that any changes for

⁵ Some amendments relating to FTE status, including a revised definition of 'staff', have been made and incorporated into the 2012 PBRF Quality Evaluation Guidelines.

the QE component over this period are a function of pool size and any adjustments from the wash-up process or data corrections.

2011 final and 2012 final allocations

Table 2.3: Final 2011 and final 2012 funding allocations – QE measure

TEO	QE Final 2011	QE Final 2012
University of Auckland	\$40,525,364	\$40,525,364
University of Otago	\$33,636,984	\$33,636,984
Massey University	\$21,833,456	\$21,833,456
University of Canterbury	\$15,896,276	\$15,896,278
Victoria University of Wellington	\$14,600,714	\$14,600,714
University of Waikato	\$9,568,154	\$9,568,154
Lincoln University	\$4,679,326	\$4,679,326
Auckland University of Technology	\$4,108,163	\$4,108,163
Unitec New Zealand	\$2,331,493	\$2,331,493
Otago Polytechnic	\$500,849	\$500,849
Manukau Institute of Technology	\$496,857	\$496,857
Christchurch Polytechnic Institute of Technology	\$376,118	\$376,118
Waikato Institute of Technology	\$346,099	\$346,099
Te Whare Wānanga o Awanuiārangi	\$199,482	\$199,482
Open Polytechnic of New Zealand	\$174,787	\$174,787
Te Wānanga o Aotearoa	\$162,661	\$162,661
Eastern Institute of Technology	\$159,704	\$159,704
Nelson Marlborough Institute of Technology	\$85,360	\$85,360
Whitireia Community Polytechnic	\$63,586	\$63,586
Northland Polytechnic	\$54,566	\$54,566
Carey Baptist College	\$51,756	\$51,756
Whitecliffe College of Arts and Design	\$42,883	\$42,883
Laidlaw College	\$25,878	\$25,878
Bethlehem Institute of Education	\$22,181	\$22,181
AIS St Helens	\$22,181	\$22,181
Good Shepherd College	\$22,181	\$22,181
Anamata	\$12,939	\$12,939
Total	\$149,999,998	\$150,000,000

2.9 Since the 2006 QE, universities have received 96.57 percent of funding against this measure.⁶ The 3.43 percent balance of the QE funding the other TEOs together receive equated to \$5.15 million in 2012.

⁶ This figure incorporates data from the Dunedin and Christchurch Colleges of Education which were previously reported separately from the universities with which they have since merged.

2012 final and 2013 indicative allocations

2.10 The appropriation for the QE component rose from \$150 million in 2012 to \$157.5 million for 2013. As noted, TEOs' ratios changed over this period, resulting in shifts in distribution and shares of funding for the first time in six years.

Table 2.4: Indicative 2013 funding compared to final 2012 funding – QE measure

TEO	QE Final 2012	QE Indicative 2013	Change(\$)	Change(%)
University of Auckland	\$40,525,364	\$44,575,334	\$4,049,970	9.99%
University of Otago	\$33,636,984	\$33,651,594	\$14,610	0.04%
Massey University	\$21,833,456	\$22,062,671	\$229,215	1.05%
University of Canterbury	\$15,896,278	\$15,344,000	-\$552,278	-3.47%
Victoria University of Wellington	\$14,600,714	\$16,153,911	\$1,553,197	10.64%
University of Waikato	\$9,568,154	\$8,554,632	-\$1,013,522	-10.59%
Lincoln University	\$4,679,326	\$4,284,345	-\$394,981	-8.44%
Auckland University of Technology	\$4,108,163	\$7,664,248	\$3,556,085	86.56%
Unitec New Zealand	\$2,331,493	\$1,946,217	-\$385,276	-16.52%
Otago Polytechnic	\$500,849	\$794,250	\$293,401	58.58%
Manukau Institute of Technology	\$496,857	\$355,303	-\$141,554	-28.49%
Christchurch Polytechnic Institute of Technology	\$376,118	\$431,912	\$55,794	14.83%
Waikato Institute of Technology	\$346,099	\$263,141	-\$82,958	-23.97%
Te Whare Wānanga o Awanuiārangi	\$199,482	\$138,476	-\$61,006	-30.58%
Open Polytechnic of New Zealand	\$174,787	\$139,347	-\$35,440	-20.28%
Te Wānanga o Aotearoa	\$162,661	-	-\$162,661	-100.00%
Eastern Institute of Technology	\$159,704	\$433,934	\$274,230	171.71%
Nelson Marlborough Institute of Technology	\$85,360	-	-\$85,360	-100.00%
Whitireia Community Polytechnic	\$63,586	\$146,812	\$83,226	130.89%
Northland Polytechnic	\$54,566	\$90,202	\$35,636	65.31%
Carey Baptist College	\$51,756	\$46,656	-\$5,100	-9.85%
Whitecliff College of Arts and Design	\$42,883	\$136,734	\$93,851	218.85%
Laidlaw College	\$25,878	\$64,697	\$38,819	150.01%
Bethlehem Institute of Education	\$22,181	\$18,662	-\$3,519	-15.86%
ALS St Helens	\$22,181	\$36,081	\$13,900	62.67%
Good Shepherd College	\$22,181	\$12,442	-\$9,739	-43.91%
Anamata	\$12,939	-	-\$12,939	-100.00%
Wellington Institute of Technology	-	\$110,855	\$110,855	
New Zealand College of Chiropractic	-	\$24,883	\$24,883	
New Zealand Tertiary College	-	\$18,662	\$18,662	
Total	\$150,000,000	\$157,500,000	\$7,500,000	5.00%

Universities

- 2.11 Following the 2012 QE, the university sector's indicative QE funding for 2013 increased by 5.14 percent or \$7.44 million, representing 96.69 percent of the total QE funding.
- 2.12 Between 2012 final QE funding and 2013 indicative QE funding, the largest increase in dollar terms was seen by the University of Auckland (up \$4.05 million or 9.99 percent). Auckland University of Technology experienced the most significant overall increase, growing by \$3.56 million or 86.56 percent on its \$4.11 million final allocation in 2012. Significant changes were also realised by Victoria University of Wellington which ranked first in the 2012 QE, after previously being ranked fourth, and saw an increase of \$1.55 million (10.64 percent) in 2013 indicative funding.
- 2.13 In 2013 indicative allocations, sizeable reductions on 2012 QE funding were sustained by the University of Waikato (down \$1.01 million or 10.59 percent) and by Lincoln University (down \$394,981 or 8.44 percent).

ITPs

- 2.14 In the ITP sector, the largest monetary gains resulting from the 2012 QE were seen at Otago Polytechnic (up \$293,401 or 58.58 percent) and the Eastern Institute of Technology (up \$274,230 or 171.71 percent). Whitireia Community Polytechnic more than doubled its QE funding from a small baseline (allocated \$83,226 for 2013), and Wellington Institute of Technology was set to receive QE funding for the first time in 2013 (\$110,855).
- 2.15 Four ITPs (Unitec New Zealand, Manukau Institute of Technology, Waikato Institute of Technology, and the Open Polytechnic of New Zealand) were allocated reduced funding for 2013. Compared with final 2012 funding, Unitec New Zealand was set to undergo the largest drop in dollar terms (\$385,276 or 16.52 percent). Nelson Marlborough Institute of Technology, which received \$85,360 in 2012, receives no QE funding in 2013.

Other TEOs

- 2.16 Te Whare Wānanga o Awanuiārangi's indicative QE funding decreased by 30.58 percent to \$138,476 for 2013, while Te Wānanga o Aotearoa lost its previous PBRF QE funding of \$162,661 as a non-participant in the 2012 QE.
- 2.17 The comparatively small baselines of PTEs resulted in wide, and sometimes high, rates of change between QE rounds but relatively small dollar amounts. Most notably, improved performance from the 2012 assessment led to the increase of \$93,851 (218.85 percent) in the indicative 2013 allocation for Whitecliffe College of Arts and Design, and Laidlaw College's \$38,819 rise on its 2012 final funding (up 150.01 percent).

Chapter 3: External research income

Introduction

- 3.1 The ERI measure accounts for 15 percent of the total funds allocated through the PBRF each year. ERI is included as a performance measure in the PBRF on the basis that it provides a good proxy for research quality. The underlying assumption is that external research funders are discriminating in their choice of who to fund, and that they will allocate their limited resources to those they see as undertaking research of a high quality.
- 3.2 ERI is defined as the total research income received by a TEO (and their wholly-owned subsidiaries), excluding income from:
- TEO employees who receive ERI in their personal capacity (i.e. the ERI is received by them and not their employer);
 - controlled trusts;
 - partnerships; and
 - joint ventures.
- 3.3 Only income for work that has actually been undertaken may be included in the ERI calculation. A complete description of inclusions and exclusions is given in the PBRF user manual.⁷
- 3.4 TEOs that participate in the ERI measure submit returns annually to the TEC showing the amount of PBRF-eligible ERI they have earned for the 12 months ending 31 December of the preceding year. A declaration signed by the TEO's Chief Executive, as well as an independent audit opinion, is provided to the TEC to support each ERI calculation. If the total ERI is less than \$200,000, the TEO is permitted to submit its worksheets in lieu of an independent audit opinion.

Funding formula for the external research income measure

- 3.5 The ERI measure is calculated as a weighted three-year rolling average. The formula used to calculate the ERI measure for 2012 is:

$$\frac{\sum [(2008 \text{ ERI for TEO} \times 0.15) + (2009 \text{ ERI for TEO} \times 0.35) + (2010 \text{ ERI for TEO} \times 0.50)]}{\sum [(Total \ 2008 \ \text{ERI for all TEOs} \times 0.15) + (Total \ 2009 \ \text{ERI for all TEOs} \times 0.35) + (Total \ 2010 \ \text{ERI for all TEOs} \times 0.50)]} \times \text{total amount of funding available for the ERI component of the PBRF}$$

- 3.6 The formula used to calculate the ERI measure for 2013 is:

$$\frac{\sum [(2009 \text{ ERI for TEO} \times 0.15) + (2010 \text{ ERI for TEO} \times 0.35) + (2011 \text{ ERI for TEO} \times 0.5)]}{\sum [(Total \ 2009 \ \text{ERI for all TEOs} \times 0.15) + (Total \ 2010 \ \text{ERI for all TEOs} \times 0.35) + (Total \ 2011 \ \text{ERI for all TEOs} \times 0.5)]} \times \text{total amount of funding available for the ERI component of the PBRF}$$

7 <http://www.tec.govt.nz/Documents/Publications/PBRF-user-manual.pdf>

External research income declared for the 2012 funding calculation

3.7 From 2008 to 2010, the total ERI declared by the 19 TEOs participating in the ERI measure was \$1.19 billion. Table 3.1 shows the ERI declared in each of these three years, the changes from year-to-year, and the weighted three-year averages used to allocate PBRF funding for this measure.

Table 3.1: External research income 2008 to 2010

TEO	2008	Change 2008 → 2009	2009	Change 2009 → 2010	2010	PBRF-weighted total (numerator)
University of Auckland	\$138,540,191	7.98%	\$149,595,526	0.10%	\$149,747,687	\$148,013,306
University of Otago	\$87,154,298	-0.16%	\$87,018,665	3.50%	\$90,064,602	\$88,561,978
Massey University	\$44,706,446	19.10%	\$53,244,095	5.01%	\$55,911,764	\$53,297,282
Victoria University of Wellington	\$29,317,878	11.18%	\$32,595,392	-1.71%	\$32,038,397	\$31,825,267
University of Canterbury	\$25,936,887	41.68%	\$36,746,477	-30.38%	\$25,582,559	\$29,543,080
Lincoln University	\$20,538,537	1.94%	\$20,937,208	8.83%	\$22,785,129	\$21,801,368
University of Waikato	\$16,848,972	22.31%	\$20,608,092	-9.79%	\$18,589,606	\$19,034,981
Auckland University of Technology	\$6,500,276	19.93%	\$7,795,524	-27.87%	\$5,623,292	\$6,515,121
Otago Polytechnic	\$146,416	396.78%	\$727,370	52.91%	\$1,112,234	\$832,659
Unitec New Zealand	\$1,540,671	-66.44%	\$516,996	-14.17%	\$443,738	\$633,918
Te Whare Wānanga o Awanuiārangi	\$164,779	189.79%	\$477,510	77.32%	\$846,732	\$615,211
Eastern Institute of Technology	\$95,455	143.40%	\$232,339	22.58%	\$284,791	\$238,033
Christchurch Polytechnic Institute of Technology	\$207,363	-22.30%	\$161,119	60.89%	\$259,231	\$217,112
Whitireia Community Polytechnic	\$70,249	-61.14%	\$27,301	892.92%	\$271,082	\$155,634
Manukau Institute of Technology	\$54,782	247.73%	\$190,493	-19.09%	\$154,124	\$151,952
Waikato Institute of Technology	\$194,061	-	\$194,061	-94.07%	\$11,500	\$102,781
Bethlehem Institute of Education	\$70,100	0.43%	\$70,400	41.16%	\$99,379	\$84,845
Open Polytechnic of New Zealand	\$89,795	-100.00%	-	-	\$87,504	\$57,221
Northland Polytechnic	\$105,032	-77.15%	\$24,000	-100.00%	-	\$24,155
Total	\$372,282,188	10.44%	\$411,162,569	-1.76%	\$403,913,351	\$401,705,903

Universities

- 3.8 The \$1.18 billion in ERI declared by universities formed 99.25 percent of the total in 2008 to 2010. The balance reported by the remaining TEOs totalled \$8.93 million.
- 3.9 Total ERI reported by TEOs increased overall by 10.44 percent between 2008 and 2009, but was down by 1.76 percent between 2009 and 2010. The recent decline was largely due to a decrease of \$11.16 million (30.38 percent) for the University of Canterbury. Auckland University of Technology and the University of Waikato also saw sizeable reductions in ERI earned between 2009 and 2010, with decreases of 27.87 percent (\$2.17 million) and 9.79 percent (\$2.02 million) respectively. The University of Auckland, the University of Otago, and Massey University remained the only providers with a double-digit share of the pool for 2012 (with approximately 37 percent, 22 percent, and 13 percent shares respectively).

Other TEOs

- 3.10 In other sectors, Otago Polytechnic and Te Whare Wānanga o Awanuiārangi achieved relatively large gains between 2009 and 2010, up 52.91 percent (\$384,864) and 77.32 percent (\$369,222) respectively.
- 3.11 Year-on-year changes in the amount of ERI declared varied widely for many TEOs and were often substantial in dollar terms. There was nevertheless overall stability within the ranks in terms of relative performance, with individual TEOs' shares of the total ERI pool fluctuating by less than one percent over the period.

External research income declared for 2013 indicative funding calculations

- 3.12 For 2009 to 2011, the total ERI declared by the 21 TEOs participating in the ERI measure was \$1.23 billion. Table 3.2 shows the ERI declared in each of these three years, the changes from year-to-year, and the weighted three-year averages used to allocate PBRF funding for this measure.

Table 3.2: External research income 2009 to 2011

TEO	2009	Change 2009 → 2010	2010	Change 2010 → 2011	2011	PBRF-weighted total (numerator)
University of Auckland	\$149,595,526	0.10%	\$149,747,687	-3.94%	\$143,852,139	\$146,777,089
University of Otago	\$87,018,665	3.50%	\$90,064,602	1.74%	\$91,628,400	\$90,389,610
Massey University	\$53,244,095	5.01%	\$55,911,764	-3.26%	\$54,087,511	\$54,599,487
Victoria University of Wellington	\$32,595,392	-1.71%	\$32,038,397	7.53%	\$34,451,981	\$33,328,738
University of Canterbury	\$36,746,477	-30.38%	\$25,582,559	7.70%	\$27,552,720	\$28,242,227
Lincoln University	\$20,937,208	8.83%	\$22,785,129	11.66%	\$25,441,610	\$23,836,181
University of Waikato	\$20,608,092	-9.79%	\$18,589,606	11.04%	\$20,642,355	\$19,918,753
Auckland University of Technology	\$7,795,524	-27.87%	\$5,623,292	69.45%	\$9,528,866	\$7,901,914
Otago Polytechnic	\$727,370	52.91%	\$1,112,234	1.56%	\$1,129,559	\$1,063,167
Te Whare Wānanga o Awanuiārangi	\$477,510	77.32%	\$846,732	18.27%	\$1,001,457	\$868,711
Wellington Institute of Technology	\$153,185	112.52%	\$325,556	61.26%	\$524,977	\$399,411

Table 3.2: External research income 2009 to 2011 – continued

TEO	2009	Change 2009 → 2010	2010	Change 2010 → 2011	2011	PBRF-weighted total (numerator)
Unitec New Zealand	\$516,996	-14.17%	\$443,738	-56.97%	\$190,925	\$328,320
Eastern Institute of Technology	\$232,339	22.58%	\$284,791	-38.17%	\$176,093	\$222,574
Christchurch Polytechnic Institute of Technology	\$161,119	60.89%	\$259,231	-40.94%	\$153,106	\$191,452
Manukau Institute of Technology	\$190,493	-19.09%	\$154,124	-38.74%	\$94,413	\$129,724
Waikato Institute of Technology	\$194,061	-94.07%	\$11,500	656.52%	\$87,000	\$76,634
Whitireia Community Polytechnic	\$27,301	892.92%	\$271,082	-15.37%	\$229,416	\$213,682
Bethlehem Institute of Education	\$70,400	41.16%	\$99,379	51.00%	\$150,067	\$120,376
New Zealand College of Chiropractic	\$9,647	328.58%	\$41,345	168.39%	\$110,967	\$71,402
Open Polytechnic of New Zealand	-		\$87,504	57.62%	\$137,920	\$99,586
Northland Polytechnic	\$24,000	-100.00%	-		-	\$3,600
Total	\$411,325,401	-1.71%	\$404,280,252	1.70%	\$411,171,482	\$408,782,639

Universities

- 3.13 The \$1.22 billion in ERI declared by universities formed 99.13 percent of the grand total for 2009 to 2011. The remaining TEOs reported just under one percent of the total ERI, amounting to \$10.71 million over this three year period.
- 3.14 Between 2009 and 2011, all but two universities increased the amount of ERI they each received, with the University of Canterbury and the University of Auckland undergoing respective decreases of 25.02 and 3.84 percent for this measure in 2010 and 2011.
- 3.15 Only two of the universities (the University of Otago and Lincoln University) were able to make successive increases in ERI over the 2009 to 2011 period, with the remainder increasing in one period and decreasing in the other. The largest percentage variation occurred at the Auckland University of Technology with a decrease of 27.87 percent between 2009 and 2010, followed by a 69.45 percent increase between 2010 and 2011. However, as Auckland University of Technology generates markedly less ERI than the other universities, its proportion of change is much higher than the rest of the sector.

Other TEOs

- 3.16 Large percentage swings on lower baselines commonly occur outside the university sector. Across the ITPs, changes in the amount of ERI funding ranged from as much as an 892.92 percent increase (at Whitireia Community Polytechnic between 2009 and 2010), to a 100 percent decrease (Northland Polytechnic between 2009 and 2010).
- 3.17 Only Otago Polytechnic and Wellington Institute of Technology were able to make consecutive increases on this measure over the three year period. The former generated the most ERI of the ITPs for all three years, receiving \$1.13 million in 2011. With consecutive increases of 112.52 percent and 61.26 percent across 2009 to 2010 and 2010 to 2011, Wellington Institute of Technology generated the

second largest ERI for the sector in 2011 (\$524,977), overtaking Unitec New Zealand which saw successive reductions in this measure.

- 3.18 Across the wānanga and PTEs, the three providers to participate – Te Whare Wānanga o Awanuiārangi, Bethlehem Institute of Education, and New Zealand College of Chiropractic – all reported consecutive increases in ERI in the three year period. Te Whare Wānanga o Awanuiārangi achieved a substantial increase across each year, growing its reported ERI by \$523,947 (109.72 percent) between 2009 and 2011.

2011 final and 2012 final allocations

- 3.19 Between the final 2011 and final 2012 allocations, funding for the ERI component remained the same. TEOs' shares of this pool are determined by their relative success in attracting ERI over the previous three year period.

Table 3.3: Final 2011 and final 2012 funding allocations – ERI measure

TEO	ERI Final 2011	ERI Final 2012	Change(\$)	Change(%)
University of Auckland	\$13,743,207	\$13,817,320	\$74,113	0.54%
University of Otago	\$8,279,778	\$8,267,427	-\$12,351	-0.15%
Massey University	\$4,732,732	\$4,975,401	\$242,669	5.13%
Victoria University of Wellington	\$2,944,408	\$2,970,948	\$26,540	0.90%
University of Canterbury	\$3,011,603	\$2,757,902	-\$253,701	-8.42%
Lincoln University	\$1,997,286	\$2,035,199	\$37,913	1.90%
University of Waikato	\$1,820,769	\$1,776,951	-\$43,818	-2.41%
Auckland University of Technology	\$701,081	\$608,199	-\$92,882	-13.25%
Otago Polytechnic	\$41,985	\$77,730	\$35,745	85.14%
Unitec New Zealand	\$101,043	\$59,177	-\$41,866	-41.43%
Te Whare Wānanga o Awanuiārangi	\$28,936	\$57,431	\$28,495	98.48%
Eastern Institute of Technology	\$14,847	\$22,221	\$7,374	49.67%
Christchurch Polytechnic Institute of Technology	\$27,271	\$20,268	-\$7,003	-25.68%
Whitireia Community Polytechnic	\$6,687	\$14,529	\$7,842	117.27%
Manukau Institute of Technology	\$12,481	\$14,185	\$1,704	13.65%
Waikato Institute of Technology	\$20,173	\$9,595	-\$10,578	-52.44%
Bethlehem Institute of Education	\$6,710	\$7,920	\$1,210	18.03%
Open Polytechnic of New Zealand	\$3,738	\$5,342	\$1,604	42.91%
Northland Polytechnic	\$5,171	\$2,255	-\$2,916	-56.39%
Carey Baptist College	\$97	-	-\$97	-100.00%
Total	\$37,500,003	\$37,500,000	-\$3	0.00%

Universities

3.20 In the university sector, four providers received increases in final ERI funding between 2011 and 2012, with Massey University undergoing by far the largest increase in both percentage and dollar terms (up \$242,669 or 5.13 percent). In monetary terms the University of Canterbury sustained a reduction of a similar order (\$253,701).

Other TEOs

3.21 The ITP sector's final ERI funding decreased between 2011 and 2012. Despite some fairly significant percentage changes at individual TEOs, most were relatively small in monetary terms. Unitec New Zealand again experienced a sharp drop on this measure, down \$41,866 or 41.43 percent in 2012 on its final 2011 ERI allocation (having decreased by 34.57 percent between 2010 and 2011). Conversely, the majority of ITPs increased their ERI over this period, with Otago Polytechnic achieving the most significant improvement (up 85.14 percent or \$35,745 on its 2011 ERI allocation).

3.22 Te Whare Wānanga o Awanuiārangi almost doubled its ERI funding in this period to reach \$57,431 in 2012. The only PTE to receive an ERI allocation for 2012, Bethlehem Institute of Education, generated an additional 18.03 percent or \$1,210.

2012 final and 2013 indicative allocations

3.23 The total PBRF-weighted ERI earned by TEOs was \$401.71 million for the 2012 final allocation, rising by \$7.08 million or 1.76 percent to \$408.78 million for the 2013 indicative allocation. Table 3.4 provides detail of these allocations.

Table 3.4: Indicative 2013 funding compared to final 2012 funding – ERI measure

TEO	Ratio 2012	Final Funding 2012	Ratio 2013	Indicative Funding 2013	Ratio Difference	Change(\$)	Change(%)
University of Auckland	36.85%	\$13,817,320	35.91%	\$14,137,948	-0.94%	\$320,628	2.32%
University of Otago	22.05%	\$8,267,427	22.11%	\$8,706,561	0.07%	\$439,134	5.31%
Massey University	13.27%	\$4,975,401	13.36%	\$5,259,164	0.09%	\$283,763	5.70%
Victoria University of Wellington	7.92%	\$2,970,948	8.15%	\$3,210,310	0.23%	\$239,362	8.06%
University of Canterbury	7.35%	\$2,757,902	6.91%	\$2,720,364	-0.45%	-\$37,538	-1.36%
Lincoln University	5.43%	\$2,035,199	5.83%	\$2,295,963	0.40%	\$260,764	12.81%
University of Waikato	4.74%	\$1,776,951	4.87%	\$1,918,626	0.13%	\$141,675	7.97%
Auckland University of Technology	1.62%	\$608,199	1.93%	\$761,133	0.31%	\$152,934	25.15%
Otago Polytechnic	0.21%	\$77,730	0.26%	\$102,407	0.05%	\$24,677	31.75%
Unitec New Zealand	0.16%	\$59,177	0.08%	\$31,625	-0.08%	-\$27,552	-46.56%
Te Whare Wānanga o Awanuiārangi	0.15%	\$57,431	0.21%	\$83,677	0.06%	\$26,246	45.70%
Eastern Institute of Technology	0.06%	\$22,221	0.05%	\$21,439	0.00%	-\$782	-3.52%
Christchurch Polytechnic Institute of Technology	0.05%	\$20,268	0.05%	\$18,441	-0.01%	-\$1,827	-9.01%

Table 3.4: Indicative 2013 funding compared to final 2012 funding – ERI measure – continued

TEO	Ratio 2012	Final Funding 2012	Ratio 2013	Indicative Funding 2013	Ratio Difference	Change(\$)	Change(%)
Whitireia Community Polytechnic	0.04%	\$14,529	0.05%	\$20,582	0.01%	\$6,053	41.66%
Manukau Institute of Technology	0.04%	\$14,185	0.03%	\$12,495	-0.01%	-\$1,690	-11.91%
Waikato Institute of Technology	0.03%	\$9,595	0.02%	\$7,382	-0.01%	-\$2,213	-23.07%
Bethlehem Institute of Education	0.02%	\$7,920	0.03%	\$11,595	0.01%	\$3,675	46.40%
Open Polytechnic of New Zealand	0.01%	\$5,342	0.02%	\$9,592	0.01%	\$4,250	79.57%
Northland Polytechnic	0.01%	\$2,255	0.00%	\$347	-0.01%	-\$1,908	-84.62%
Wellington Institute of Technology	0.00%	-	0.10%	\$38,472	0.10%	\$38,472	
New Zealand College of Chiropractic	0.00%	-	0.02%	\$6,878	0.02%	\$6,878	
Total	100.00%	\$37,500,000	100.00%	\$39,375,000	-	\$1,875,000	5.00%

Universities

- 3.24 The university sector's share of indicative ERI funding increased for 2013, with its overall rise of approximately \$1.8 million absorbing almost all of the five percent growth in the ERI funding pool.
- 3.25 Auckland University of Technology achieved the greatest change percentage-wise, up 25.15 percent (\$152,934) on its 2012 allocation, although again on a significantly lower baseline than the rest of the sector. Likewise Lincoln University also made significant gains, up 12.81 percent (\$260,764).
- 3.26 The highest increase in dollar terms was realised by the University of Otago, the second highest funded TEO which increased its 2012 allocation by \$439,134 (5.31 percent) to \$8.71 million in indicative ERI for 2013. The University of Auckland saw a reduction in its ratio of almost one percentage point following the 2012 QE and a relatively modest 2.32 percent change in indicative funding for this period. However, the University of Auckland was still set to retain a margin of approximately \$5.4 million more ERI funding than the University of Otago for 2013.

Other TEOs

- 3.27 Outside of the universities, other providers' total share of indicative ERI for 2013 remained similar to 2012, with an overall increase of \$74,279. While there are some significant percentage shifts, these are generally very small in monetary terms.
- 3.28 The largest changes were seen by Te Whare Wānanga o Awanuiārangi and Unitec New Zealand in the wake of the 2012 QE. Where the 2013 allocation grew for the former by about 46 percent (\$26,246), it reduced for the latter by a similar amount (with the ITP down 46.56 percent or \$27,552).

Chapter 4: Research degree completions

Introduction

- 4.1 The RDC measure accounts for 25 percent of the total funds to be allocated through the PBRF each year. The use of RDC as a performance measure in the PBRF serves two key purposes:
- It captures, to some degree, the connection between staff research and research training, thus providing some assurance of the future capability of tertiary education research; and
 - It provides a proxy for research quality. The underlying assumption is that students choosing to undertake lengthy, expensive and advanced degrees (especially Doctorates) will tend to search out departments and supervisors who have excellent reputations in the relevant fields for high quality research and research training.
- 4.2 To be eligible for the RDC measure, research-based postgraduate degrees (such as Masters and Doctorates) must be completed within a TEO, and meet the following criteria:
- the degree has an externally assessed research component of 0.75 Equivalent Full-Time Student (EFTS) value or more;
 - the student who has completed the degree has met all compulsory academic requirements by 31 December of the relevant year; and
 - the student has completed the course successfully.
- 4.3 Following extensive work with the sector to improve reporting practices, the TEC has moved to using the SDR for RDC data collection, on which funding decisions are based after TEOs confirm their figures. This new process was first used for the final 2010 funding allocation.

Funding formula and allocations

- 4.4 The RDC measure is calculated as a weighted three-year rolling average, with additional weightings for the following factors:
- the funding category of the subject area (“cost weighting”);
 - Māori and Pasifika student completions (“equity weighting”); and
 - the volume of research in the degree programme (“research component weighting”).
- 4.5 The formula used to calculate the number of RDCs for each TEO is:

$$\text{RDC} = [(\text{cost weighting for relevant subject area}) \times (\text{equity weighting}) \times (\text{research component weighting})]$$

- 4.6 The cost weightings for the various subject areas, as shown in Table 4.1 below, are the same as those applied in the QE part of the PBRF. They are determined by the course’s Student Achievement Component funding category as set down in the course register.

Table 4.1: Cost weighting

Student Achievement Component – Funding Category	Weighting
A, I, J	1
B, L	2
C, G, H, M, Q	2.5

4.7 Table 4.2 shows the equity weighting applied to each individual research degree completion. This weighting aims to encourage TEOs to enrol and support Māori and Pasifika students, as their representation at higher levels of the New Zealand Qualifications Framework is low.⁸ The ethnicity weighting is applied to each matched course completion record, based on the student ethnicity from the student file associated with the matched enrolment.

Table 4.2: Equity weighting

Ethnicity	Weighting
Māori	2
Pasifika	2
All other ethnicities	1

4.8 The research component weighting uses a “volume of research factor” (VRF) based on the volume of research making up the completed degree programme, as shown in Table 4.3.

Table 4.3: Research component weighting

Research component weighting	VRF
Less than 0.75 EFTS	0
0.75 EFTS to 1.0 EFTS research component	EFTS value of research component
Masters course of 1.0 thesis or more	1
Professional doctorate with research component	EFTS value of research component
Doctorate	3

4.9 For 2012 funding, the formula for the proportion of the RDC measure allocated to each TEO is:

$$\frac{\sum [(2008 \text{ RDC for TEO} \times 0.15) + (2009 \text{ RDC for TEO} \times 0.35) + (2010 \text{ RDC for TEO} \times 0.50)]}{\sum [(Total \text{ 2008 RDC for all TEOs} \times 0.15) + (Total \text{ 2009 RDC for all TEOs} \times 0.35) + (Total \text{ 2010 RDC for all TEOs} \times 0.50)]} \times \text{total amount of funding available for the RDC component of the PBRF}$$

4.10 For 2013 funding, the formula for the proportion of the RDC measure allocated to each TEO is:

$$\frac{\sum [(2009 \text{ RDC for TEO} \times 0.15) + (2010 \text{ RDC for TEO} \times 0.35) + (2011 \text{ RDC for TEO} \times 0.50)]}{\sum [(Total \text{ 2009 RDC for all TEOs} \times 0.15) + (Total \text{ 2010 RDC for all TEOs} \times 0.35) + (Total \text{ 2011 RDC for all TEOs} \times 0.50)]} \times \text{total amount of funding available for the RDC component of the PBRF}$$

⁸ From the 2012 Quality Evaluation onwards, a strategic equity weighting of 4 will be applied to all RDCs in which the content of the thesis is written entirely in te reo Māori.

Research Degree Completions funding allocations for 2011, 2012, and 2013

Table 4.4: Final 2011 and final 2012 funding allocations – RDC measure

TEO	RDC Final 2011	RDC Final 2012	Change(\$)	Change(%)
University of Auckland	\$19,703,061	\$20,021,776	\$318,715	1.62%
University of Otago	\$10,612,380	\$10,565,142	-\$47,238	-0.45%
Massey University	\$8,104,393	\$7,636,798	-\$467,595	-5.77%
University of Canterbury	\$8,238,228	\$7,255,801	-\$982,427	-11.93%
Victoria University of Wellington	\$5,548,702	\$6,034,751	\$486,049	8.76%
University of Waikato	\$3,984,663	\$4,137,787	\$153,124	3.84%
Auckland University of Technology	\$3,228,996	\$3,192,820	-\$36,176	-1.12%
Lincoln University	\$1,806,913	\$1,958,441	\$151,528	8.39%
Unitec New Zealand	\$683,746	\$924,740	\$240,994	35.25%
Waikato Institute of Technology	\$211,410	\$252,407	\$40,997	19.39%
Whitecliffe College of Arts and Design	\$115,275	\$169,111	\$53,836	46.70%
Otago Polytechnic	\$136,082	\$123,816	-\$12,266	-9.01%
Te Whare Wānanga o Awanuiārangi	\$47,487	\$117,052	\$69,565	146.49%
Eastern Institute of Technology	\$43,500	\$62,803	\$19,303	44.37%
Laidlaw College	\$35,162	\$46,754	\$11,592	32.97%
Total	\$62,499,999	\$62,500,000	\$1	0.00%

Universities

4.11 Four of the eight universities received increases on their 2011 RDC funding for 2012, namely the University of Auckland, Victoria University of Wellington, the University of Waikato, and Lincoln University. The largest increase for this measure in both proportion and monetary terms was achieved by Victoria University of Wellington, up \$486,049 or 8.76 percent between 2011 and 2012.

4.12 In total the university sector received \$424,020 (0.69 percent) less final RDC funding in 2012 than 2011. The largest decrease occurred at the University of Canterbury which saw its final allocation for 2012 drop by 11.93 percent (\$982,427) on the previous year.

Other TEOs

4.13 Overall, the ITP sector's RDC funding in 2012 increased by 26.89 percent or \$289,028 on its 2011 baseline. Four of the ten participating ITPs received RDC funding for 2012. Unitec New Zealand again generated the highest proportion of RDC funding and notably increased its allocation on 2011 by 35.25 percent or \$240,994 to tally \$924,740 in 2012. The next highest performing RDC recipient in the sector, Waikato Institute of Technology, received \$252,407 in 2012, a significant increase of 19.39 percent.

4.14 In 2012, Te Whare Wānanga o Awanuiārangi more than doubled its 2011 RDC funding levels, increasing by 146.49 percent or \$69,565 to reach \$117,052. This growth is notable given that this institution only began awarding RDCs in 2011.

- 4.15 Whitecliffe College of Arts and Design and Laidlaw College were the only two PTEs to receive RDC funding in 2012, each rising by significant proportions on their 2011 allocations (up 46.70 percent or \$53,836 and 32.97 percent or \$11,592 percent respectively).

2012 indicative and 2012 final allocations

Table 4.5: Indicative and final RDC funding allocations for 2012 – RDC measure

TEO	RDC Indicative 2012	RDC Final 2012	Change(\$)	Change(%)
University of Auckland	\$20,281,250	\$20,021,776	-\$259,474	-1.28%
University of Otago	\$10,650,000	\$10,565,142	-\$84,858	-0.80%
Massey University	\$7,625,000	\$7,636,798	\$11,798	0.15%
University of Canterbury	\$7,325,000	\$7,255,801	-\$69,199	-0.94%
Victoria University of Wellington	\$6,143,750	\$6,034,751	-\$108,999	-1.77%
University of Waikato	\$4,143,750	\$4,137,787	-\$5,963	-0.14%
Auckland University of Technology	\$2,762,500	\$3,192,820	\$430,320	15.58%
Lincoln University	\$1,981,250	\$1,958,441	-\$22,809	-1.15%
Unitec New Zealand	\$943,750	\$924,740	-\$19,010	-2.01%
Waikato Institute of Technology	\$256,250	\$252,407	-\$3,843	-1.50%
Whitecliffe College of Arts and Design	\$137,500	\$169,111	\$31,611	22.99%
Otago Polytechnic	\$112,500	\$123,816	\$11,316	10.06%
Te Whare Wānanga o Awanuiārangi	\$75,000	\$117,052	\$42,052	56.07%
Eastern Institute of Technology	\$31,250	\$62,803	\$31,553	100.97%
Laidlaw College	\$31,250	\$46,754	\$15,504	49.61%

- 4.16 Although the final wash-up for the 2012 RDC funding made no change to the total allocation, several providers' final allocations varied significantly from indicative amounts.
- 4.17 The university sector experienced minor fluctuations with a mix of small increases and decreases. Auckland University of Technology was the exception to this, with a significant increase of 15.58 percent (\$430,320) compared with its 2012 indicative RDC amount. 2012 final RDC funding for six universities decreased compared with their indicative funding. The decreases were relatively small for the most part in both percentage and monetary terms, with the largest drops coming from the University of Auckland (down \$259,474 or 1.28 percent) and Victoria University of Wellington (down \$108,999 or 1.77 percent).
- 4.18 2012 final and 2013 indicative allocations across the ITPs, Unitec New Zealand received by far the largest share of RDC funding although its 2012 final allocation decreased slightly by 2.01 percent or \$19,010 compared with its 2012 indicative allocation. The largest increase in both monetary terms and percentage was achieved by the Eastern Institute of Technology, with an increase of \$31,553 or 100.97 percent.
- 4.19 The other three participating providers that returned RDC data experienced significant percentage increases between indicative and final funding on a wide range of baselines. Te Whare Wānanga o Awanuiārangi experienced an increase of 56.07 percent or \$42,052, Laidlaw College saw its indicative 2012 RDC allocation rise by 49.61 percent or \$15,504, and Whitecliffe College of Arts and Design grew its allocation by 22.99 percent or \$31,611.

2012 final and 2013 indicative allocations

4.20 For 2012 final funding, \$62.50 million was available for allocation through the RDC measure, based on 2008 to 2010 data. Total funding increased by \$3.13 million for the 2013 indicative RDC allocations which were based on 2009 to 2011 data.

4.21 Fifteen TEOs were eligible for 2012 final and 2013 indicative funding allocations for the RDC measure, as set out in Table 4.6 below.⁹ Detailed information about RDCs for 2008 to 2011 is provided later in the chapter.

Table 4.6: Indicative 2013 funding compared to final 2012 funding – RDC measure

TEO	Ratio 2012	Final Funding 2012	Ratio 2013	Indicative Funding 2013	Ratio Difference	Change(\$)	Change(%)
University of Auckland	32.03%	\$20,021,776	33.18%	\$21,773,223	1.14%	\$1,751,447	8.75%
University of Otago	16.90%	\$10,565,142	16.94%	\$11,115,785	0.03%	\$550,643	5.21%
Massey University	12.22%	\$7,636,798	10.77%	\$7,070,970	-1.44%	-\$565,829	-7.41%
University of Canterbury	11.61%	\$7,255,801	10.01%	\$6,571,582	-1.60%	-\$684,219	-9.43%
Victoria University of Wellington	9.66%	\$6,034,751	11.60%	\$7,611,273	1.94%	\$1,576,521	26.12%
University of Waikato	6.62%	\$4,137,787	6.76%	\$4,435,671	0.14%	\$297,884	7.20%
Auckland University of Technology	5.11%	\$3,192,820	5.33%	\$3,499,414	0.22%	\$306,593	9.60%
Lincoln University	3.13%	\$1,958,441	3.24%	\$2,128,136	0.11%	\$169,695	8.66%
Unitec New Zealand	1.48%	\$924,740	1.06%	\$695,677	-0.42%	-\$229,063	-24.77%
Waikato Institute of Technology	0.40%	\$252,407	0.38%	\$250,586	-0.02%	-\$1,820	-0.72%
Whitecliffe College of Arts and Design	0.27%	\$169,111	0.14%	\$94,320	-0.13%	-\$74,791	-44.23%
Otago Polytechnic	0.20%	\$123,816	0.33%	\$213,878	0.13%	\$90,062	72.74%
Te Whare Wānanga o Awanuiārangi	0.19%	\$117,052	0.15%	\$95,914	-0.04%	-\$21,138	-18.06%
Eastern Institute of Technology	0.10%	\$62,803	0.06%	\$39,895	-0.04%	-\$22,908	-36.48%
Laidlaw College	0.07%	\$46,754	0.04%	\$28,678	-0.03%	-\$18,076	-38.66%
Total	100.00%	\$62,500,000	100.00%	\$65,625,000	-	\$3,125,000	5.00%

Universities

4.22 The university sector continued to perform most strongly against the RDC measure at an aggregate level, receiving 97.29 percent of the available funding in the final 2012 allocation and 97.84 percent in the 2013 indicative allocation. This equated to an increase of \$3.40 million.

4.23 The University of Auckland was again the top performer by a large margin: of the total RDC funding, this institution received 32.03 percent (\$20.02 million) in 2012 and was allocated 33.18 percent of the pool (\$21.77 million) for 2013, a rise of 8.75 percent or \$1.75 million. This was almost double the RDC

⁹ The RDC figures for over-lapping years (2009 and 2010) may not match due to data accuracy work. Updated figures will be reported in the PBRF annual report for 2013.

funding of the next highest performer for this measure: the University of Otago received \$10.57 million in 2012 and an indicative allocation of \$11.12 million for 2013, growing this measure more modestly by 5.21 percent.

- 4.24 Victoria University of Wellington had the largest proportional rise in indicative RDC funding across the universities, with a 26.12 percent (\$1.58 million) increase for 2013 on its 2012 final funding. Conversely, the University of Canterbury and Massey University underwent respective decreases of 9.43 percent (\$684,219) and 7.41 percent (\$565,829) in their 2013 indicative allocations.

Other TEOs

- 4.25 Apart from Otago Polytechnic which increased its RDC allocation by 72.74 percent or \$90,062 for 2013, all of the ITPs that received funding for this measure were allocated decreases on their 2012 funding. The largest reduction in monetary terms was experienced by Unitec New Zealand which, after rising by 35.25 percent between 2011 and 2012, saw its 2013 RDC allocation fall by 24.77 percent (\$229,063) compared with its 2012 final funding. The Eastern Institute of Technology underwent the largest percentage decrease for this sector, down 36.48 percent (\$22,908). The Eastern Institute of Technology's comparatively low baseline magnifies the effects of fluctuating RDC counts.
- 4.26 Likewise, Whitecliffe College of Arts and Design, Te Whare Wānanga o Awanuiārangi, and Laidlaw College saw reductions in their 2013 RDC indicative funding, down respectively by 44.23 percent (\$74,791), 18.06 percent (\$21,138), and 38.66 percent (\$18,076) on their 2012 final funding.

Research degree completions by ethnicity

- 4.27 Table 4.7 below presents ethnicity counts for RDCs. To provide a maximum of meaningful data on change here, this table covers 2008 to 2011.

Table 4.7: Research degree completions by ethnicity, 2008 to 2011

Ethnicity	2008	Pro-portion of total 2008	Change 2008 → 2009	2009	Pro-portion of total 2009	Change 2009 → 2010	2010	Pro-portion of total 2010	Change 2010 → 2011	2011	Pro-portion of total 2011	Total
European	1,679	60.94%	5.36%	1,769	60.50%	3.45%	1,830	58.26%	15.79%	2,119	58.81%	7,397
Asian	558	20.25%	9.68%	612	20.93%	19.44%	731	23.27%	19.43%	873	24.23%	2,774
Other	225	8.17%	-1.78%	221	7.56%	-10.86%	197	6.27%	5.58%	208	5.77%	851
Māori	133	4.83%	-5.26%	126	4.31%	23.02%	155	4.93%	-9.68%	140	3.89%	554
Not Stated	84	3.05%	10.71%	93	3.18%	-18.28%	76	2.42%	-6.58%	71	1.97%	324
Pasifika Peoples	72	2.61%	8.33%	78	2.67%	29.49%	101	3.22%	-7.92%	93	2.58%	344
MELAA*	4	0.15%	525.00%	25	0.85%	104%	51	1.62%	94.12%	99	2.75%	179
Total	2,755		6.13%	2,924		7.42%	3,141		14.71%	3,603		12,423

*MELAA refers to Middle Eastern/Latin American/African

- 4.28 Year-on-year, the total count of RDCs has continued to rise. Overall the number of RDCs between 2008 and 2011 grew for all ethnicities, with the exception of the 'Other', and 'Not Stated' categories, down 17 and 13 respectively over the period.
- 4.29 The total proportion of European RDCs declined slightly over the period, starting on a share of 60.94 percent in 2008 and slowly decreasing over time to account for 58.81 percent of the total pool in 2011. During this same period the Asian ethnic category underwent steady growth, going from 20.25

percent in 2008 to account for 24.23 percent of all RDCs by 2011. The MELAA group also notably increased its RDCs, rising from four to 99 counts across this period.

- 4.30 While both the Māori and Pasifika priority groups increased their RDC counts between 2008 and 2011, this was nevertheless achieved on small margins and their shares of total RDCs concurrently decreased.
- 4.31 By 2011, RDCs by Māori accounted for just 3.89 percent (140 counts) of the total pool, compared with 4.83 percent (133 counts) in 2008. While Pasifika students made steady gains with year-on-year percentage increases from 2008 to 2010, this group still only accounted for 2.58 percent of total RDCs in 2011 (compared with their 2.61 percent share in 2008).
- 4.32 Overall these results are disappointing given the equity weighting and additional funding in place to incentivise and support growth in RDCs by these priority ethnic groups.
- 4.33 Factors to consider in the analysis of ethnicity data include the fact that students may report a different ethnicity or ethnicities over the course of their study which can exceed six years in duration.

Research degree completions by TEO, 2008 to 2011

- 4.34 The tables in the series that follows provide RDC counts for the years 2008 to 2011, thereby incorporating overlapping data used for two funding periods¹⁰ and allowing greater analysis of changes over time.

Table 4.8: RDCs by NQF/NZQF grouping with change between years, 2008 to 2011

TEO	PBRF NQF/ NZQF grouping	2008	Change 2007 → 2008	2009	Change 2008 → 2009	2010	Change 2009 → 2010	2011	Change 2010 → 2011	Total
The University of Auckland	Doctorate	227	14%	245	8%	292	19%	321	10%	1,284
	Masters	578	3%	706	22%	694	-2%	838	21%	3,375
	Post Grad	27	-13%	5	-81%	5	0%	8	60%	76
University of Otago	Doctorate	156	3%	177	13%	208	18%	220	6%	913
	Masters	212	3%	223	5%	194	-13%	263	36%	1,097
	Post Grad	17	-23%	19	12%	22	16%	36	64%	116
Massey University	Doctorate	119	4%	121	2%	139	15%	120	-14%	613
	Masters	249	15%	234	-6%	196	-16%	216	10%	1,112
University of Canterbury	Doctorate	135	31%	117	-13%	111	-5%	113	2%	579
	Masters	209	-17%	205	-2%	203	-1%	191	-6%	1,060
	Post Grad		-100%					20		23
Victoria University of Wellington	Doctorate	72	-22%	76	6%	141	86%	153	9%	534
	Masters	258	34%	231	-10%	246	6%	405	65%	1,332
University of Waikato	Doctorate	45	-24%	59	31%	61	3%	96	57%	320
	Masters	135	2%	137	1%	191	39%	155	-19%	751
Auckland University of Technology	Doctorate	46	254%	24	-48%	32	33%	39	22%	154
	Masters	122	171%	135	11%	129	-4%	168	30%	599
	Post Grad	14	27%	26	86%	43	65%	2	-95%	96

¹⁰ While these counts were accurate at the time funding decisions were made in late 2012, for 2013 indicative funding they may be subject to change. Any revisions for the years 2009 to 2011 will be reflected in the PBRF Annual Report 2013.

Table 4.8: RDCs by NQF/NZQF grouping with change between years, 2008 to 2011 – continued

TEO	PBRF NQF/ NZQF grouping	2008	Change 2007 → 2008	2009	Change 2008 → 2009	2010	Change 2009 → 2010	2011	Change 2010 → 2011	Total
Lincoln University	Doctorate	20	-29%	33	65%	44	33%	51	16%	176
	Masters	34	-8%	38	12%	35	-8%	33	-6%	177
Unitec New Zealand	Doctorate		-100%	1			-100%			2
	Masters	32	-22%	72	125%	80	11%	96	20%	321
Waikato Institute of Technology	Masters	7	17%	3	-57%	7	133%	8	14%	31
	Post Grad	9	-10%	11	22%	21	91%	12	-43%	63
Otago Polytechnic	Doctorate		-100%							1
	Masters	14	56%	5	-64%	8	60%	28	250%	64
	Post Grad	1			-100%					1
Christchurch College of Education	Masters		-100%	1			-100%			3
Whitecliffe College of Arts and Design	Masters	10	-9%	5	-50%	18	260%		-100%	44
Te Whare Wānanga o Awanuiārangi	Doctorate							2		2
	Masters	3		3	0%	9	200%	4	-56%	19
	Post Grad		-100%							7
Eastern Institute of Technology	Masters			6		5	-17%	1	-80%	12
Laidlaw College Incorporated	Masters	4	33%	6	50%	7	17%	4	-43%	24
Total		2,755		2,924		3,141		3,603		14,981

Universities

4.35 Between 2008 and 2011, consecutive year-on-year growth in PhDs was reported by the University of Auckland, the University of Otago, Victoria University of Wellington and the University of Waikato. Over this period, the University of Auckland produced the highest increase in the number of RDCs for Doctorates (up by 94 to 321 counts in 2011), as well as Masters (up by 260 to 838 counts in 2011). Victoria University of Wellington experienced the biggest percentage rise in both level ten and level nine research degrees, up by 112.5 percent to 153 PhDs in 2011 and 56.98 percent to 405 Masters in 2011.

Other TEOs

4.36 Given the small number of postgraduate completions at other TEOs, changes in RDCs that would otherwise be considered insignificant resulted in large percentage changes. Unitec New Zealand notably tripled its number of Masters from 32 completions in 2008 to 96 in 2011. Other significant positive changes were seen at Otago Polytechnic, which doubled its number of Masters over the period (to tally 28 in 2011), and Te Whare Wānanga O Awanuiārangi which awarded its first two doctorates in 2011. Conversely Whitecliffe College of Arts and Design reported no RDCs in 2011, its first zero result in this period.

Research degree completions by broad field of study and subject-area weighting, 2008 to 2011

4.37 This section provides sets of tables and associated commentary on RDCs between 2008 and 2011 for each level of PBRF-eligible postgraduate study. In addition to subject-area weightings, data is cut by broad field of study, as defined by the New Zealand Standard Classification of Education (NZSCED).¹¹ TEOs appear in alphabetical order.

All RDC types

4.38 Table 4.9 sets out the numbers of RDCs (all types aggregated) for each TEO by broad field of study.

Table 4.9: Aggregated RDC types by broad field of study and TEO, 2008 to 2011

Broad NZSCED	TEO	2008	2009	2010	2011	Total
Agriculture, Environmental and Related Studies	Lincoln University	4	8	3	6	21
	Massey University	6	4	5	7	22
	The University of Auckland	2	4	2	3	11
	University of Canterbury	1	3	2	2	8
	University of Otago	11	18	13	10	52
	Victoria University of Wellington	28	24	14	22	88
	Total	52	61	39	50	202
Architecture and Building	Lincoln University				2	2
	Massey University	1	2	2	2	7
	The University of Auckland	17	67	31	107	222
	Unitec New Zealand	2	28	40	37	107
	Victoria University of Wellington	5	4	10	78	97
	Total	25	101	83	226	435
Creative Arts	Auckland University of Technology	60	76	100	76	312
	Massey University	41	33	47	27	148
	Otago Polytechnic	12	3	6	26	47
	The University of Auckland	121	122	117	129	489
	Unitec New Zealand	4	5	4	5	18
	University of Canterbury	13	21	25	23	82
	University of Otago	2	1	8	24	35
	University of Waikato	9	7	24	8	48
	Victoria University of Wellington	20	16	19	22	77
	Waikato Institute of Technology	15	14	25	18	72
	Whitecliffe College of Arts and Design	10	5	18		33
	Total	307	303	393	358	1,361

11 http://www.educationcounts.govt.nz/data-services/collecting-information/code_sets/new_zealand_standard_classification_of_education_nzsced

Table 4.9: Aggregated RDC types by broad field of study and TEO, 2008 to 2011 – continued

Broad NZSCED	TEO	2008	2009	2010	2011	Total
Education	Auckland University of Technology	5	4	6	5	20
	Christchurch College of Education		1			1
	Massey University	25	7	15	23	70
	The University of Auckland	25	21	12	25	83
	Unitec New Zealand	4	6	2	2	14
	University of Canterbury	6	5	11	31	53
	University of Otago	1			2	3
	University of Waikato	23	21	31	30	105
	Victoria University of Wellington	6	5	11	29	51
	Total	95	70	88	147	400
Engineering and Related Technologies	Auckland University of Technology		7	8	7	22
	Massey University	16	28	20	24	88
	The University of Auckland	63	60	74	78	275
	University of Canterbury	27	18	30	21	96
	University of Otago				1	1
	University of Waikato	10	4	13	8	35
	Victoria University of Wellington			2	2	4
	Total	116	117	147	141	521
Health	Auckland University of Technology	20	16	17	21	74
	Eastern Institute of Technology		6	5	1	12
	Massey University	2	8	3	4	17
	Otago Polytechnic	3	2	2	2	9
	The University of Auckland	51	54	45	60	210
	Unitec New Zealand	1	7	16	22	46
	University of Canterbury	14	13	21	22	70
	University of Otago	43	48	46	67	204
	Victoria University of Wellington	5	10	6	4	25
	Waikato Institute of Technology	1		3	2	6
	Total	140	164	164	205	673
Information Technology	Auckland University of Technology	5	9	3	20	37
	Lincoln University	4	2	1		7
	Massey University	5	6		3	14
	Unitec New Zealand	7	6	4	10	27
	Total	21	23	8	33	85
Management and Commerce	Auckland University of Technology	10	25	16	8	59
	Lincoln University	8	11	14	11	44
	Massey University	25	16	18	15	74
	The University of Auckland	33	40	55	55	183
	Unitec New Zealand	14	18	12	19	63

Table 4.9: Aggregated RDC types by broad field of study and TEO, 2008 to 2011 – continued

Broad NZSCED	TEO	2008	2009	2010	2011	Total
	University of Canterbury	5	4	5	6	20
	University of Otago	10	12	4	28	54
	University of Waikato		9	3	12	24
	Victoria University of Wellington	21	23	17	14	75
	Total	126	158	144	168	596
Mixed Field Programmes	Auckland University of Technology	6	3			9
	Lincoln University	20	33	44	51	148
	Massey University	116	117	122	106	461
	Te Whare Wananga O Awanuiarangi				2	2
	The University of Auckland	215	227	278	291	1,011
	University of Canterbury	135	117	114	113	479
	University of Otago	150	170	197	204	721
	University of Waikato		2	2		4
	Victoria University of Wellington	71	76	142	159	448
	Total	713	745	899	926	3,283
Natural and Physical Sciences	Auckland University of Technology	8	8	7	11	34
	Lincoln University	15	16	16	13	60
	Massey University	51	49	41	42	183
	The University of Auckland	191	235	236	279	941
	University of Canterbury	83	84	65	70	302
	University of Otago	104	104	105	130	443
	University of Waikato	45	50	57	47	199
	Victoria University of Wellington	80	56	50	81	267
	Total	577	602	577	673	2,429
Society and Culture	Auckland University of Technology	68	37	47	61	213
	Laidlaw College Incorporated	4	6	7	4	21
	Lincoln University	3	1	1	1	6
	Massey University	80	85	62	83	310
	Te Whare Wānanga o Awanuiārangi	3	3	9	4	19
	The University of Auckland	114	126	141	140	521
	Unitec New Zealand		3	2	1	6
	University of Canterbury	60	57	41	36	194
	University of Otago	64	66	51	53	234
	University of Waikato	93	103	122	146	464
	Victoria University of Wellington	94	93	116	147	450
	Total	583	580	599	676	2,438
Total		2,755	2,924	3,141	3,603	12,423

- 4.39 Overall, Mixed Field Programmes have consistently produced the highest number of RDCs, totalling 926 in 2011 (up from 713 counts in 2008). Society and Culture, and Natural and Physical Sciences, have also consistently produced the next highest number of RDCs, tallying 676 and 673 respectively for 2011. A notable increase in RDCs occurred in Architecture and Building which grew from 25 counts in 2008 to 226 in 2011. This field saw sharp increases between 2010 and 2011 from the University of Auckland (up by 76 counts to 107) and Victoria University of Wellington (up by 68 counts to 78).
- 4.40 Outside of the Mixed Field category, the performance of the universities largely reflects their traditional strengths. In 2011, for example, there were high proportions of PhDs and Masters in:
- Society and Culture for Victoria University of Wellington (26.34 percent of its total RDCs);
 - Natural and Physical Sciences at the University of Auckland (23.91 percent of its total RDCs) and the University of Otago (25.05 percent of its total RDCs); and
 - Creative Arts at the Auckland University of Technology (36.36 percent of its total RDCs).
- 4.41 Of interest also were increases or high volumes over the period in:
- Agriculture at Victoria University of Wellington;
 - Engineering at the University of Auckland;
 - Education at the University of Waikato; and
 - Information Technology at Auckland University of Technology.
- 4.42 Unitec New Zealand, Eastern Institute of Technology, Waikato Institute of Technology and Otago Polytechnic were the only ITPs to produce PBRF-eligible RDCs, doing so primarily in the fields of Architecture and Building, Creative Arts, and Health. In 2011, Otago Polytechnic significantly increased its RDCs in the Creative Arts field to 26, up from six in 2010. Unitec New Zealand also reported steady or growing numbers of RDCs in Information Technology and Management and Commerce in 2011.
- 4.43 Te Whare Wānanga o Awanuiāraangi and Laidlaw College, the only other providers outside of the universities and ITPs with RDCs in 2011, reported single digit counts in Mixed Field and Society and Culture categories.

Table 4.10: Doctoral completions by subject weighting and broad NZSCED, 2008 to 2011

TEO	Subject weighting	Broad NZSCED	2008	2009	2010	2011	Total
The University of Auckland	1	Education	6	4	4	9	23
		Mixed Field Programmes	63	57	71	82	273
	2	Health					0
		Society and Culture	3	7	8	11	29
		Creative Arts	3	7	1	5	16
		Mixed Field Programmes	85	71	96	77	329
	2.5	Health			2	5	7
		Mixed Field Programmes	67	99	110	132	408
		Total	227	245	292	321	1,085
University of Otago	1	Education				2	2
		Management and Commerce	1				1
		Mixed Field Programmes	28	47	44	64	183
	2	Natural and Physical Sciences	1				1
		Agriculture, Environmental and Related Studies					0

Table 4.10: Doctoral completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject weighting	Broad NZSCED	2008	2009	2010	2011	Total
		Society and Culture					0
		Mixed Field Programmes	75	71	84	94	324
	2.5	Natural and Physical Sciences	1				1
		Health	7	12	14	18	51
		Society and Culture					0
		Mixed Field Programmes	43	47	66	42	198
		Total	156	177	208	220	761
Massey University	1	Education	5	3	8	4	20
		Management and Commerce		2	3	3	8
		Mixed Field Programmes	35	38	42	36	151
	2	Society and Culture		3	7	11	21
		Mixed Field Programmes	51	42	55	50	198
	2.5	Mixed Field Programmes	28	33	24	16	101
		Total	119	121	139	120	499
University of Canterbury	1	Mixed Field Programmes	32	24	24	34	114
	2	Mixed Field Programmes	50	50	49	31	180
	2.5	Mixed Field Programmes	53	43	38	48	182
Victoria University of Wellington	1	Natural and Physical Sciences					0
		Society and Culture	1				1
		Mixed Field Programmes	29	32	64	73	198
	2	Mixed Field Programmes	42	43	73	75	233
	2.5	Mixed Field Programmes		1	4	5	10
		Total	72	76	141	153	442
University of Waikato	1	Education				4	4
		Society and Culture	18	25	30	49	122
	2	Society and Culture	24	25	25	39	113
	2.5	Society and Culture	3	9	6	4	22
		Total	45	59	61	96	261
Auckland University of Technology	1	Education		1	1	1	3
		Society and Culture	20	8	17	14	59
	2	Health	1	1	1		3
		Society and Culture	17	9	10	13	49
	2.5	Health	1	1			2
		Society and Culture	7	4	3	11	25
		Total	46	24	32	39	141
Lincoln University	1	Management and Commerce					0
		Mixed Field Programmes	3	7	11	18	39
	2	Mixed Field Programmes	6	10	18	16	50
	2.5	Mixed Field Programmes	11	16	15	17	59

Table 4.10: Doctoral completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject weighting	Broad NZSCED	2008	2009	2010	2011	Total
	Total		20	33	44	51	148
Unitec New Zealand	1	Education		1			1
	2.5	Information Technology					0
	Total		0	1	0	0	1
Otago Polytechnic	2	Creative Arts					0
Te Whare Wānanga o Awanuiārangi	1	Mixed Field Programmes				2	2
	Total		0	0	0	2	2
Total			820	853	1,028	1,115	3,816

Doctorates

- 4.44 Table 4.10 above shows consistent growth in PhD counts between 2008 and 2011, with the largest increase (175 additional Doctorates) evident 2009 and 2010.
- 4.45 In 2011, Mixed Field programmes accounted for most doctoral completions (912 counts) by a significant margin on the next highest category of PhDs which totalled 152 in Society and Culture.
- 4.46 The University of Auckland had the highest number of PhDs in Mixed Field Programmes in 2011. These were concentrated in 2.5-weighted subject areas (132 PhDs, compared with 82 and 77 in 1.0-weighted and 2.0-weighted subject areas). The University of Otago notably increased its number of 1.0 and 2.0-weighted PhDs, respectively up from 29 to 66 and 76 to 94 over the 2008 to 2011 period. Health was an area of growth for this institution in 2.5-weighted cost categories (up from 7 PhDs in 2008 to 18 in 2011).
- 4.47 Of note also were the University of Waikato's significant increases in PhDs which occurred almost entirely in Society and Culture – counts in 1.0-weighted subject areas improved from 18 to 49 over the period, with a more moderate rise in 2.0-weighted subject areas (up from 24 to 39 counts in 2011).
- 4.48 Te Whare Wānanga O Awanuiārangi was the only provider outside of the University sector to record doctoral completions in 2011 (two PhDs in 1.0-weighted Mixed Field Programmes).

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
The University of Auckland	1	Natural and Physical Sciences	7	8	9	13	37
		Agriculture, Environmental and Related Studies			1		1
		Education	19	15	8	15	57
		Management and Commerce	27	28	46	47	148
		Society and Culture	91	87	87	92	357
		Creative Arts	6	8	10	14	38
	2	Natural and Physical Sciences	128	171	155	201	655
		Engineering and Related Technologies	10	8	7	2	27
		Health	16	18	11	19	64
		Education		2		1	3
		Management and Commerce	6	12	9	8	35
		Society and Culture	15	27	41	30	113

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
		Creative Arts	111	107	106	110	434
		Mixed Field Programmes			1		1
	2.5	Natural and Physical Sciences	35	56	72	65	228
		Engineering and Related Technologies	53	52	67	76	248
		Architecture and Building	17	67	31	107	222
		Agriculture, Environmental and Related Studies	2	4	1	3	10
		Health	35	36	32	35	138
		Total	578	706	694	838	2,816
University of Otago	1	Natural and Physical Sciences		1	2	2	5
		Education	1				1
		Management and Commerce	6	11	4	28	49
		Society and Culture	41	40	39	38	158
		Creative Arts			1	5	6
		Mixed Field Programmes	2	1		2	5
	2	Natural and Physical Sciences	78	81	81	95	335
		Health	6	7	6	2	21
		Management and Commerce	3	1			4
		Society and Culture	15	16	10	9	50
		Creative Arts	2	1	7	19	29
		Mixed Field Programmes	1	3	3	2	9
	2.5	Natural and Physical Sciences	16	11	8	16	51
		Engineering and Related Technologies				1	1
		Agriculture, Environmental and Related Studies	11	18	13	10	52
		Health	21	21	18	28	88
		Society and Culture	8	10	2	6	26
		Mixed Field Programmes	1	1			2
	Total	212	223	194	263	892	
Massey University	1	Natural and Physical Sciences	3	2	4	1	10
		Information Technology		2			2
		Engineering and Related Technologies		1			1
		Agriculture, Environmental and Related Studies	1	2		1	4
		Education	19	4	7	16	46
		Management and Commerce	25	14	15	7	61
		Society and Culture	46	44	32	47	169
		Mixed Field Programmes	1				1
	2	Natural and Physical Sciences	43	44	31	37	155
		Information Technology	5	4		3	12
		Engineering and Related Technologies		2			2

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
		Health		2	1	1	4
		Education	1			3	4
		Management and Commerce				1	1
		Society and Culture	32	38	22	22	114
		Creative Arts	41	33	47	27	148
		Mixed Field Programmes	1	4	1	1	7
	2.5	Natural and Physical Sciences	5	3	6	4	18
		Engineering and Related Technologies	16	25	20	24	85
		Architecture and Building	1	2	2	2	7
		Agriculture, Environmental and Related Studies	5	2	5	6	18
		Health	2	6	2	3	13
		Management and Commerce				4	4
		Society and Culture	2		1	3	6
		Mixed Field Programmes				3	3
		Total		249	234	196	216
University of Canterbury	1	Natural and Physical Sciences	1	6	2	3	12
		Education	6	5	11	11	33
		Management and Commerce	5	4	5	6	20
		Society and Culture	45	48	36	27	156
		Creative Arts	1	5	3	2	11
	2	Natural and Physical Sciences	76	69	47	61	253
		Agriculture, Environmental and Related Studies				1	1
		Society and Culture	15	9	5	9	38
		Creative Arts	12	16	22	21	71
		Mixed Field Programmes			1		1
	2.5	Natural and Physical Sciences	6	9	16	6	37
		Engineering and Related Technologies	27	18	30	21	96
		Agriculture, Environmental and Related Studies	1	3	2	1	7
		Health	14	13	21	22	70
		Mixed Field Programmes			2		2
	Total		209	205	203	191	808
Victoria University of Wellington	1	Natural and Physical Sciences	9	1	2	6	18
		Education	6	5	11	29	51
		Management and Commerce	19	21	17	14	71
		Society and Culture	76	77	97	122	372
		Mixed Field Programmes				4	4

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
	2	Natural and Physical Sciences	66	55	47	74	242
		Agriculture, Environmental and Related Studies	28	24	14	22	88
		Health	5	10	6	4	25
		Management and Commerce	2	2			4
		Society and Culture	17	16	19	25	77
		Creative Arts	20	16	19	22	77
		Mixed Field Programmes			1	2	3
	2.5	Natural and Physical Sciences	5		1	1	7
		Engineering and Related Technologies			2	2	4
		Architecture and Building	5	4	10	78	97
		Total		258	231	246	405
University of Waikato	1	Natural and Physical Sciences			1		1
		Education	20	21	28	21	90
		Management and Commerce		9	3	12	24
		Society and Culture	21	17	29	23	90
	2	Natural and Physical Sciences	40	49	51	45	185
		Education	3		3	5	11
		Society and Culture	27	27	30	31	115
		Creative Arts	9	7	24	8	48
		Mixed Field Programmes		2	2		4
	2.5	Natural and Physical Sciences	5	1	5	2	13
		Engineering and Related Technologies	10	4	13	8	35
	Society and Culture			2		2	
	Total		135	137	191	155	618
Auckland University of Technology	1	Education	5	3	5	4	17
		Management and Commerce	10	25	16	8	59
		Society and Culture	17	8	10	9	44
		Creative Arts	15	32	26	36	109
	2	Natural and Physical Sciences	8	7	7	11	33
		Information Technology	5	9	3	20	37
		Society and Culture	4	4	5	9	22
		Creative Arts	31	20	32	38	121
	2.5	Engineering and Related Technologies		6	7	7	20
		Health	18	14	16	21	69
		Society and Culture	3	4	2	5	14
		Mixed Field Programmes	6	3			9
	Total		122	135	129	168	554

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
Lincoln University	1	Natural and Physical Sciences			1		1
		Agriculture, Environmental and Related Studies				1	1
		Management and Commerce	8	10	12	11	41
		Society and Culture	3	1	1	1	6
	2	Natural and Physical Sciences	10	5	9	8	32
		Information Technology	4	2	1		7
		Agriculture, Environmental and Related Studies	2	3	2	4	11
	2.5	Natural and Physical Sciences	5	11	6	5	27
		Architecture and Building				2	2
		Agriculture, Environmental and Related Studies	2	5	1	1	9
		Management and Commerce		1	2		3
	Total		34	38	35	33	140
Christchurch College of Education	1	Education		1			1
	Total		0	1	0	0	1
Eastern Institute of Technology	2	Health		6	5	1	12
	Total		0	6	5	1	12
Laidlaw College Incorporated	1	Society and Culture	4	6	7	4	21
	Total		4	6	7	4	21
Unitec New Zealand	1	Education	4	5	2	2	13
		Management and Commerce	14	16	12	19	61
		Society and Culture		3	2	1	6
		Creative Arts	1	3	2		6
	2	Information Technology	7	6	4	10	27
		Health	1	7	16	22	46
		Creative Arts	3	2	2	5	12
	2.5	Architecture and Building	2	28	40	37	107
		Management and Commerce		2			2
	Total	32	72	80	96	280	
Otago Polytechnic	2	Health	3	2	2	2	9
		Creative Arts	11	3	6	26	46
	Total		14	5	8	28	55

Table 4.11: Masters completions by subject weighting and broad NZSCED, 2008 to 2011 – continued

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
Te Whare Wananga O Awanuiarangi	1	Society and Culture	3	3	9	4	19
	Total		3	3	9	4	19
Waikato Institute of Technology	2	Health	1		3	2	6
		Creative Arts	6	3	4	6	19
	Total		7	3	7	8	25
Whitecliffe College of Arts and Design	2	Creative Arts	10	5	18		33
	Total		10	5	18	0	33
Total			1,867	2,010	2,022	2,410	8,309

Masters

- 4.49 The data on Masters completions shows growth over the four year period with a continued shift toward higher weighted Masters categories. It also demonstrates faster growth between 2010 and 2011: between 2009 and 2010 period there was overall growth in total Masters of just 12 completions compared with the 388 additional completions in 2011, the biggest year-on-year change over this period.
- 4.50 Between 2008 and 2011, Masters completions rose for most eligible providers. The most significant numerical increase was achieved by the University of Auckland (up by 260 completions to total 838 in 2011), while the largest percentage rise occurred at Unitec New Zealand, increasing its Level 9 RDCs by 200 percent to 96 completions in 2011.
- 4.51 Natural and Physical Sciences, Society and Culture, and Creative Arts continued to account for the highest numbers of Masters completions in 2011. The University of Auckland delivered the most completions in each of these areas (42.53 percent, 23.60 percent, and 36.58 percent respectively).
- 4.52 There was a large increase in 2.0-weighted completions in 2011 for Natural and Physical Sciences, with the University of Auckland increasing by 46, Victoria University of Wellington by 27, and University of Canterbury and the University of Otago by 14 completions in 2011.
- 4.53 Masters in the 2.5-weighted Architecture and Building category rose particularly sharply between 2010 and 2011, with the University of Auckland increasing by 76 counts (from 31 to 107) and Victoria University of Wellington increasing by 68 (from 10 to 78). In Creative Arts, the University of Otago and Otago Polytechnic increased their 2.0-weighted completions by 12 and 20 respectively between 2010 and 2011 (while Massey University and the University of Waikato saw falls in this same field and cost category, down by 20 and 16 counts respectively).

Table 4.12: Postgraduate Diplomas and Honours completions by subject weighting and broad NZSCED, 2008 to 2011

TEO	Subject Weighting	Broad NZSCED	2008	2009	2010	2011	Total
The University of Auckland	2	Natural and Physical Sciences	21				21
		Creative Arts	1				1
	2.5	Health				1	1
		Society and Culture	5	5	5	7	22
	Total		27	5	5	8	45
University of Otago	2	Natural and Physical Sciences	8	11	14	17	50
		Health		1			1
	2.5	Health	9	7	8	19	43
	Total		17	19	22	36	94
University of Canterbury	1	Education				20	20
	Total					20	20
Auckland University of Technology	2	Creative Arts	14	24	42	2	82
	2.5	Natural and Physical Sciences		1			1
		Engineering and Related Technologies		1	1		2
	Total		14	26	43	2	85
Otago Polytechnic	2	Creative Arts	1				1
	Total		1				1
Waikato Institute of Technology	2	Creative Arts	9	11	21	12	53
	Total		9				
Total			68	61	91	78	298

Postgraduate Diplomas and Honours

- 4.54 Over the four year period, the number of Postgraduate Diplomas and Honours completions fluctuated across the six providers that awarded them. In 2011 the highest number of these completions was seen by the University of Otago, with 17 completions in 2.0-weighted Natural and Physical Sciences and 19 in 2.5-weighted Health. The highest single number of completions was for 1.0-weighted education at the University of Canterbury, which awarded 20 postgraduate Diplomas and Honours in 2011.
- 4.55 Overall, the University of Otago recorded the highest number of Postgraduate Diplomas and Honours over the four year period, due to increases in both 2.0-weighted Natural and Physical Sciences and 2.5-weighted Health.

