

# Extended Baseline Report: Graduate Longitudinal Study New Zealand

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## INTRODUCTION

The Graduate Longitudinal Study New Zealand (hereafter GLSNZ) conducted baseline sampling across the eight New Zealand Universities between July and December, 2011. Cohort recruitment was bench-marked against the most recent (i.e., 2010) graduate data provided by the participating New Zealand Universities.

### State-of-the-Science

A relatively small number of studies globally have sought to map the long-term outcomes of a nation's university graduates through time. Our literature search identified only 12 other, large-scale, broadly 'nationally representative' longitudinal graduate studies in other parts of the world, including studies from Australia, the UK, Europe, Canada, and the USA (these studies are described in detail in Appendix 1). In contrast, there are a plethora of university-specific, one-point-in-time studies examining student experiences, but these were not established as longitudinal-prospective studies of graduate outcomes. Here we summarise some key characteristics of previous longitudinal graduate outcome research, highlighting some key challenges inherent in this type of research, and how the GLSNZ sought to address these.

### Challenges

(i) *Representativeness*: Although many studies claim representative sampling of the general student population, often specific groups of students are excluded, for example, international students and those who were not domiciled in the country at the time of the survey, part-time students, mature students, and extramural (distance) students. It was common for studies to only include bachelor/first degree students. Indeed we were able to identify only one other project (apart from the GLSNZ) that included international students, part-time students, students who moved countries after graduation, and distance students.

Complicating matters further, target samples are occasionally drawn from a group of students who had previously participated in a different graduate outcome study (or similar kind of study) and were "followed-up" some years later. These kinds of studies typically contain inadequate baseline data as the survey instruments often differ between baseline and follow-up. Perhaps more problematic, in some instances a preliminary target sample is selected (that is representative of the population) and then additional respondents are included to boost numbers (often based on arbitrary criteria such as having an email address) or because participating institutions have "purchased" additional numbers.

(ii) *Sample size*: Study sample sizes are sometimes not sufficient to permit meaningful sub-group analyses. Some study authors try to ameliorate this problem by oversampling certain groups, however, this can result in samples that are not proportionally representative of the student population. In this context, it is important to note that this problem can be (but is not always) addressed by weighting the responses of oversampled groups.

(iii) *Methodological limitations*: In some cases, different survey measures are used at each assessment point within the same cohort making comparisons across time untenable. With regard to longitudinal follow-ups, often graduates are only surveyed once following their graduation and then asked to provide retrospective accounts of what they have been doing for the previous X years. (recall over long periods is weak methodologically). Among the truly prospective studies (i.e. those with multiple follow-up assessments), most do not "track" respondents for long – usually only three or four years, and usually not more than five years.

(iv) *Retention of the sample over time*: Often the participating institutions hold the addresses of the study participants and these quickly become obsolete making it difficult to contact potential respondents. Unsurprisingly this results in poorer response rates over time.

(v) *Narrow focus*: The majority of the existing studies have focused primarily on employment outcomes (although some studies have also examined university experiences). Unfortunately there is a dearth of studies that have measured a broad range of factors that might moderate employment and career success, with the possible exception of socio-economic variables in selected cases. Life outcomes more generally are rarely enquired about.

This situation is exacerbated by a general lack of transparency in reporting and/or comprehensiveness in study description, measurement documentation and procedural processes.

In the GLSNZ, we have attempted to overcome some of these limitations by:

- Ensuring that our baseline sample is broadly representative of the entire New Zealand 2011 graduating cohort sample in terms of sex, age, ethnicity, qualification level and type, subject area, study load (EFTS), mode of study, and student citizenship status.
- Prospectively following the same sample at regular intervals for at least 10 years post-graduation.
- Using the same 'core' set of measures at each survey wave in order to examine intra-individual change (i.e., trajectories) across time.
- Contacting survey invitees on multiple occasions at baseline (and follow-up), using a variety of media, to encourage them to take part and improve recruitment/retention rates.
- Examining a host of factors that may influence graduate outcomes including a range of socio-demographic variables; university experiences; academic beliefs; future plans; goals and values; physical health, well-being, personality measures; and community involvement.
- Ensuring that all documentation and reports are publicly available and transparent.

### **Sampling for the GLSNZ 2011**

With input from our University partners we randomly selected a representative sub-sample of all potential 2011 graduates (approximately 30% of the expected total) and invited them to take part in an online survey about their University experiences and future plans. The parameters used to select the sample are described in detail in the "Sample Selection Parameters and Sample Description" section. In addition, sample comparisons with 2010 completion data are presented in Appendix 2 (n.b., analysis will take place to confirm representativeness when the final national 2011 graduate data become available).

### **Baseline Recruitment**

Recruitment for the baseline cohort sample was successful. We targeted a 70% uptake by those invited to participate in the study, and achieved 72% participation in some form. We chose to apply conservative criteria for ultimate inclusion in the sample, requiring participants to have completed what was a comparatively lengthy survey (400+ questions taking an average of 36.2 minutes to completion; interquartile range = 28 to 43 minutes).

This resulted in a founding cohort of  $N = 8,719$  (or 65.2% of the total eligible graduates; see Table 1.01 for more information). This sample will now be re-assessed at 2-, 5-, and 10-years post-graduation; that is, during six-month periods spanning October 2013 to March 2014; October 2016 to March 2017; and October 2021 to March 2022.

**Content**

The GLSNZ baseline survey captured a broad range of information including: Demographics; university expectations, experience and satisfaction; employment plans and career aspirations; fit with qualification/training; academic beliefs/attitudes, current financial circumstances; physical health, disability and functional impairment; health risk behaviours; emotional wellbeing; personality type; social support/social integration and community involvement.

**Policy relevance**

To the best of our knowledge, the GLSNZ is/will be the most comprehensive longitudinal lifecourse study of graduate outcomes in the world. A review of international literature supports this assertion (see above and Appendix 1).

Descriptive findings are presented in the “Descriptive Analyses of GLSNZ Variables” section. This provides an initial ‘high-level pass’ over the data, with the aim of demonstrating the potential of the GLSNZ for addressing policy-relevant questions. In accordance with initial agreements, all data are presented as a single New Zealand-wide sample.



## EXECUTIVE SUMMARY

What follows is a brief descriptive summary of data tabulated in the “Descriptive Analyses of GLSNZ Variables” section.

It does not attempt to describe all data, preferring instead to highlight selected findings of general interest. Nor does it seek to ‘interpret’ or extract meaning at this stage; this next step will require further, in-depth analyses continuing throughout 2012.

### Demographic characteristics

Just over 62% of the GLSNZ graduating cohort sample from 2011 were female and 37.6% were male. Most graduates were aged <30 years (70.7%). A small number of graduates (0.8%) were >60 years of age. With regard to ethnicity, 61% self-reported New Zealand European ethnicity, 7.2% Māori, 11.3% Chinese, 5.3% Indian and 3.5% Pasifika. A significant minority (21.6%) endorsed other ethnicities ( $n = 107$  ethnicities), reflecting considerable ethnic diversity among New Zealand university graduates.

With respect to degree level, 59% of the sample were studying for undergraduate degrees, 13% were completing masters-level study and 5% were doctoral graduates. The most common study domain (defined in Table 1.02) was Humanities/Arts/Social Sciences (25.3%), closely followed by Sciences/Engineering (20.3%) and Commerce (20%) domains. Just under 10% of the 2011 New Zealand graduating cohort were from the Health Sciences. Over one third of 2011 graduates were studying part-time, with one in nine completing their study via extramural/distance learning courses.

In terms of relationship status, 40.6% reported being single, with the remainder either married, in a relationship, or living together with their de facto partner. A small number (2.5%) had been widowed, separated or divorced. With regard to family responsibilities, one in five graduates were parenting in 2011. Almost half of all parents of last year’s graduating cohort had themselves not graduated from a university, with 37% of the 2011 graduates reporting that they were the first member of their immediate family to attend University.

### Connections to the world

Approximately one in nine were international graduates ( $n = 1004$ ), of whom  $n = 212$  (21.1%) were doctoral-level graduates. Interestingly, there were similar numbers ( $n = 223$ ) of domestic doctoral graduates in the study sample. In other words, approximately half of the 2011 doctoral-level graduates in the GLSNZ sample were international graduates. Mapping the lifecourse trajectories of the international PhD graduates is of particular interest to the Ministry of Education.

### Language proficiency

One quarter of the graduates indicated that English was not their first language, with almost one in five of these reporting less than ideal levels of fluency in English. Among the non-native English speakers in the sample ( $n = 2241$ , 25.7%) only 42% were required to take a test of English as a foreign language for entrance into their university programme. Among this group ( $n = 941$ ), 80% regarded this test as sufficient for study at a New Zealand university, whereas 20% did not. High levels of fluency in Te Reo Māori (1.1%) and sign language (1.4%) in the cohort were rare.

### **University experiences, career choices and aspirations**

The three most frequently endorsed reasons for graduates choosing a University were: (1) the relevance of the courses offered to their career (70.1%), (ii) the academic reputation of the university (47.2%), and (iii) location (44.7%).

The three most frequently endorsed reasons for graduates choosing a field of study were: (1) a strong interest in the topic/field (77.1%), (ii) wanting to pursue a career in this topic/field (71.4%), and (iii) to increase earning potential (34.5%).

One quarter of graduates had sought careers advice during their time at university, with over two thirds of those describing the quality of advice as either good or excellent. A similar pattern was observed with respect to the availability of careers advice. More than three quarters of the 2011 graduates reported that they thought their study programme had been worth the investment (i.e., time, cost, effort). A similar percentage reported that their university experience had lived up to their expectations. The corollary of the above is that there was a significant minority who reported less than desirable levels of satisfaction in these areas. This is perhaps reflected in there being approximately 60% of graduates who said they wish to retain links with their University (e.g. via Alumni Associations), with slightly more (70%) keen to maintain the social connections formed during their student days.

The graduates were asked to rate the university factors that they thought were most important for making graduates more employable. Those deemed most important were: (i) ensuring a good fit between skills taught and professional practice needs; (ii) critical thinking and analysis, transferability of skills, and creative/innovative thinking; and (iii) high skill levels of staff, both in terms of practical experience and knowledge as well as research knowledge and expertise.

In terms of how graduates perceived their University education benefitting them in the future, the most frequently endorsed items were, in order: (i) personal development, (ii) obtaining employment, and (iii) career development. Interestingly, 'developing entrepreneurial skills' was the least frequently endorsed option.

Importantly, approximately three quarters of the graduates evaluated their overall experience at University very positively, with four out of five reporting they would recommend their University to others.

### **The next two years...**

With regard to the near future (the next two years), three quarters of the graduates expected to pursue their career, with a number of this group also working in jobs to ensure income. Almost half (45.1%) anticipated undertaking further study during this period.

The majority of participants (82.6%) planned to work in New Zealand, with a significant proportion also planning to work overseas (37.2%), and a percentage intending to do both. We compared the number of international versus domestic students who planned to work in New Zealand, work overseas, and work in their country of origin. Approximately 80% of domestic PhD students indicated that they planned to work in New Zealand in the next two years, compared to approximately 50% of international PhD students. Similar percentages (approximately 44%) of international and domestic PhD students planned to work overseas. With respect to non-PhD students, just over 85% of domestic students indicated that they would work in New Zealand in the next two years, compared to approximately 63% of international students.

The most common fields in which graduates plan to seek employment were, in order: (i) Education and Training, (ii) Health Care and Medical, and (iii) Science and Technology. In terms of what graduates are looking for in a career or job, the most commonly endorsed attributes were, in order: (i) job satisfaction, (ii) financial security, and (iii) the 'opportunity to apply knowledge and skills' along with 'a good work/life balance.'

With regard to the more distant future (where participants would like to be in 10 years time), the most frequently endorsed items were, in order: (i) in full-time employment, (ii) establishing their career further, and (iii) partnered/married. Interestingly, 27.1% indicated that they would like to be living and working overseas.

### **Financial circumstances**

With regard to their 2011 work status and financial circumstances, only 40% of the graduates were not employed, either full- or part-time, when they were studying. Among those employed, the work was related to the course of study only about 50% of the time.

The total income received by graduates was relatively low, with median = \$10,001 to \$15,000; mode = \$5,001 to \$10,000; range = zero (8.2%) to \$150,001+ (0.8%).

Approximately four out of five graduates had taken out a student loan. Among those with student loans, the median loan was \$15,001 to \$20,000; mode = \$15,001 to \$20,000; range = zero (7.0%) to 100,001+ (0.5%).

### **Health, behaviour and personality type**

In terms of health, 85% described their overall physical health as good or better, with 9.5% of the cohort reporting smoking at least one cigarette for a month or more during the past year. Almost 12% of the graduates drank no alcohol at the time of the survey, 18% drank at least once per week, with 6.5% drinking alcohol at least four times per week.

In terms of emotional wellbeing, the sample scores were normally distributed, and comparable with other student surveys, with (as expected) a minority reporting low levels of wellbeing. A similar picture emerged for personality type, with normally-distributed data allowing strong tests of the association between these factors and a range of long-term outcomes over the course of the study.

### **Community engagement**

Local community involvement (in many forms), initiative and altruism were clearly valued and evident among this group of graduates, with a premium placed on multiculturalism and tolerance of different lifestyles. Furthermore, approximately 20% of the graduates reported active involvement in national or international community organisations (e.g., Red Cross, Search and Rescue, Greenpeace, Amnesty International, World Vision).

## **Success factors**

Approximately one third of participants indicated that there were some key factors that had hindered the completion of their qualification but over half indicated that there were some key factors that helped the completion of their qualification.

## **Where to from here?**

The 2011 GLSNZ sample appears to reflect the heterogeneity of graduating students from New Zealand Universities at the beginning of the second decade of the 21st century. International tertiary education is the seventh largest export industry in New Zealand,<sup>1</sup> and it is noteworthy that this group of international students is well represented in the GLSNZ cohort. Men and women of all ages, ethnic backgrounds, course types and modes of study have enrolled in the study. They completed a lengthy online survey that is considerably longer than typically administered in this type of research.

This has resulted in a breadth and depth of data that provide us with an unparalleled opportunity to study, in detail, graduates' lifecourse pathways in the first decade after leaving University – a particularly salient and important career establishment period.

Over time, the GLSNZ should help inform stakeholders seeking to optimise multiple aspects of the tertiary contribution to the national good, that is, the launch-pad (i.e., the University), the transition (i.e., into employment and becoming a civic-minded citizen), and career trajectories (i.e., steepening these, and spurring innovation). This should have significant private and public benefits for those attending, running and funding New Zealand's eight Universities, as well as for New Zealand more generally.

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<sup>1</sup> Matthew Haigh, Statistics New Zealand (personal communication, May 13, 2011).

## SAMPLE SELECTION PARAMETERS AND SAMPLE DESCRIPTION

### Sample Response Rates

The survey was administered from 31 July 2011 to 16 December 2011. Start dates were staggered across the Universities as follows:

31 July 2011:	University of Auckland Lincoln University
21 August 2011:	Auckland University of Technology (AUT)
11 September 2011:	Massey University University of Waikato
18 September 2011:	University of Canterbury University of Otago Victoria University of Wellington

A total of  $n = 8,719$  participants (65.35% response rate) across all universities completed the survey. Table 1.01 shows response rates for each university:

**Table 1.01. Survey response rates by institution**

University	Total <sup>a</sup>	Unsubscribed <sup>b</sup>	Started <sup>c</sup>	Completed
Auckland	3093	148 (4.78%)	294 (9.51%)	2062 (66.67%)
AUT	1420	62 (4.37%)	95 (6.69%)	906 (63.80%)
Canterbury	707	32 (4.53%)	37 (5.23%)	487 (68.88%)
Lincoln	583	30 (5.15%)	39 (6.69%)	433 (74.27%)
Massey	2420	122 (5.04%)	145 (5.99%)	1524 (62.98%)
Otago	2059	63 (3.06%)	131 (6.36%)	1388 (67.41%)
Victoria	1956	96 (4.91%)	92 (4.70%)	1245 (63.65%)
Waikato	1105	42 (3.80%)	58 (5.25%)	674 (61.00%)
Total	13343	595 (4.46%)	891 (6.68%)	8719 (65.35%)

<sup>a</sup> Based on subtracting the number of ineligible participants (participants who were not final-year students and who were included in the sample in error [ $n = 64$ ] and participants for whom we did not have valid contact information [ $n = 1,230$ ]) from the total number of participants provided by each university (total starting sample = 14,637).

<sup>b</sup> Participants who asked to be unsubscribed because they did not want to participate.

<sup>c</sup> Participants who consented ( $n = 9$ ) or started the survey but did not complete it ( $n = 882$ ).

In the sections that follow, we have adopted a conservative approach and included only those who completed the survey ( $n = 8,719$ ) in the analytic sample.

For a comparison of the final GLSNZ sample ( $n = 8,719$ ) with 2010 completion data, see Appendix 2.

## Sample Selection Parameters

Each university was asked to provide a representative sample of randomly-selected final-year students according to the following criteria:

### Eligibility criteria

- Final-year student status: Students who were in a programme of study that would *potentially allow them to have completed the requirements for their qualification in 2011* (i.e., their normal annual course load would have allowed them to complete their qualification in 2011). This included students who had the potential to complete their qualification during the first or second semesters in 2011 but did *not* include students who had completed their qualification during the 2011 summer school.
- Level of study: Students who were intending to complete a *bachelor's degree or above (i.e., level 7 or above) in 2011*, were eligible for inclusion in the cohort.

### GLSNZ study domains

Each university provided a specified number of students ( $\pm 3\%$  margin) from each of the following major domains of study:

- Agriculture/Horticulture
- Commerce/Business
- Education
- Health Sciences
- Humanities/Arts/Social Sciences
- Law
- Sciences/Engineering

Table 1.02 shows the departments/schools that fell into each domain at each university.

**Table 1.02. GLSNZ Domain Constituents**

<b>University</b>	<b>Agriculture/ Horticulture</b>	<b>Commerce/ Business</b>	<b>Education</b>	<b>Health Sciences</b>	<b>Humanities/ Arts/ Social Sciences</b>	<b>Law</b>	<b>Sciences/ Engineering</b>
Waikato		Management School	Education		Arts & Social Sciences	Law	Computing & Mathematical Sciences Science and Engineering
Canterbury		Commerce	Education Teaching & Learning		Creative Arts Humanities & Social Sciences	Law	Engineering and Forestry Science
Lincoln	Agriculture & Life Sciences	Commerce			Environment, Society & Design		
Massey	Veterinary Science	Business	Education		Creative Arts/Design Humanities & Social Sciences		Science
Otago		Commerce	Education	Health Sciences	Humanities		Science
AUT		Business	Education	Health Sciences	Applied Humanities Arts Design & Creative Tech	Law	Health & Environment Computer/Maths Sciences Engineering
Victoria		Commerce & Administration	Education		School of Music Architecture & Design Humanities & Social Science	Law	Science
Auckland		Business & Economics	Education	Medical & Health Sciences	Creative Arts & Industries Arts	Law	Science Engineering

Within each study domain, each University provided a specified number of students ( $\pm 3\%$  margin) according to breakdowns by sex, ethnicity, EFTS (Equivalent Full-time Student), level of study, study method, and student status/citizenship:

**Sex**

- Male
- Female

**Ethnicity**

- New Zealand European
- Māori
- Samoan
- Cook Islands Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other (e.g., Dutch, Japanese, Tokelauan)

**Age**

- 15–19 years
- 20–24 years
- 25–29 years
- 30–34 years
- 35–39 years
- 40–44 years
- 45–49 years
- 50–54 years
- 55–59 years
- 60–64 years
- 65–69 years
- 70+ years

**EFTS (Equivalent Full-time Student)**

- Full-time: Students who were enrolled in a programme of study for the full year that equated to 1 EFTS or students enrolled in a programme of study for one semester that equated to 0.5 EFTS.
- Part-time: Students who did not meet the requirements above as full-time.



### **Level of study**

- Undergraduate: Bachelor's (including honour's\*), conjoint/double degree bachelor's.
- Postgraduate: Graduate certificates, graduate diplomas, postgraduate certificates, postgraduate diplomas, master's (including honour's), PhD.

\* Note: There were situations in which several students completing their fourth year were coded as undergraduates (e.g., honour's degree students) whereas other students completing their fourth year were coded as postgraduates (e.g., postgraduate diploma students). Both are level 8 qualifications according to the National Qualifications Framework. In further study level analyses, Level 7 qualifications were assigned to the undergraduate category and Levels 8, 9, and 10 qualifications were assigned to the postgraduate category.

### **Mode of study**

- Intramural: Students for whom 50% or more of their total EFTS were internal papers/courses (i.e., on campus).
- Extramural: Students for whom 50% or more of their total EFTS were external papers/courses (i.e., distance courses).

### **Student status/citizenship**

- Domestic students
- International students

Note: All international PhD students at each University were invited to join the sample.

## Sample Description

### Basic Demographic Variables

#### Sex

Data are based on participants' responses to the item 'Are you? [Male; Female]'. If participants skipped this question ( $n = 8$ ), data were supplemented from demographic details provided by their University.

Note:

- There are 15 cases for which self-identified sex does not match sex provided by the university – in all cases, sex identified by the participant in the survey was used.

**Table 1.03. Sex of participants**

<b>Sex</b>	<b><i>n</i></b>	<b>Percent</b>
Male	3281	37.6%
Female	5438	62.4%
Total	8719	100%

## Age

Data are based on participants' responses to the item 'What is your date of birth?' If participants skipped this question ( $n = 73$ ), data were supplemented from demographic details provided by their university.

Age (years) was standardised as at the final day of the survey (16 December 2011). One university did not provide participants' date of birth but provided their age in years (it is unclear at what point this age was calculated). For participants from this university who did not provide their date of birth, the estimate of their age (years) given by the University was used ( $n = 6$  cases).

Note:

- There are 31 cases for which self-identified date of birth does not match date of birth/age provided by the University – in all cases, the date of birth identified by the participant in the survey was used.

**Table 1.04. Age of participants**

<b>Age band</b>	<b><i>n</i></b>	<b>Percent</b>
15-19 years	17	0.2%
20-24 years	4657	53.4%
25-29 years	1493	17.1%
30-34 years	756	8.7%
35-39 years	543	6.2%
40-44 years	415	4.8%
45-49 years	340	3.9%
50-54 years	265	3.0%
55-59 years	153	1.8%
60-64 years	55	0.6%
65-69 years	13	0.1%
70+ years	12	0.1%
Total	8719	100%

## Ethnicity

Data are based on participants' responses to the item 'Which ethnic group(s) do you belong to?' Participants were able to select as many ethnicities as applied.

**Table 1.05. Participants' endorsement of ethnicities**

<b>Ethnicity</b>	<b><i>n</i></b>	<b>Percent</b>
New Zealand European	5349	61.3%
Māori	624	7.2%
Samoan	153	1.8%
Cook Islands Māori	52	0.6%
Tongan	74	0.8%
Niuean	26	0.3%
Chinese	983	11.3%
Indian	460	5.3%
Other	1884	21.6%
Total	9605	110.2%

Note:

- This table lists the number of participants who endorsed each ethnicity, hence percentages do not add to 100%. Percentages are expressed as number of endorsements/8719 (total sample size).

### Description of 'other' ethnicities

Participants specifying 'other' ethnicities were grouped into 107 ethnicities with 2 further 'unclear' ( $n = 26$  [1.4%]) and 'skipped specification' ( $n = 24$  [1.3%]) categories. Of the new 'other' categories, the most frequently endorsed were:

**Table 1.06. Participants' endorsement of 'other' ethnicities**

<b>"Other" ethnicity</b>	<b><i>n</i></b>	<b>Percent</b>
British	178	9.4%
Korean	143	7.6%
South African	123	6.5%
Malaysian	96	5.1%
Filipino	82	4.4%
Dutch	74	3.9%
American	58	3.1%
Australian	58	3.1%
German	56	3.0%
Vietnamese	49	2.6%
Sri Lankan	48	2.5%
Fiji Islander	47	2.5%
Taiwanese	46	2.4%
African	45	2.4%
Middle Eastern	45	2.4%
European	42	2.2%
Canadian	40	2.1%
Indonesian	38	2.0%
Japanese	37	2.0%
Kiwi/New Zealander	35	1.9%
Russian	35	1.9%
Thai	26	1.4%
French	24	1.3%
Iranian/Persian	21	1.1%
Latin American	21	1.1%
Pakistani	21	1.1%
Arab	20	1.1%
Irish	19	1.0%
Cambodian	18	1.0%
Remainder	289	15.3%
Unclear	26	1.4%
Skipped specification	24	1.3%
<b>Total</b>	<b>1884</b>	<b>100%</b>

### Broad categories of ethnicities

Participants were assigned to a single ethnicity based on the ethnicity option(s) that they endorsed. If participants skipped the ethnicity item, data were supplemented from demographic details provided by their university ( $n = 18$ ). If participants endorsed more than one ethnicity, they were assigned to the 'Multiple' category, with the exception of participants who endorsed 'Māori' ethnicity – these participants were assigned to the Māori ethnic group. The four participants who were described by their Universities as being 'Asian' or 'Pacific Islands' were assigned to the 'Other' category.

**Table 1.07. Participants' broad categories of ethnicities**

<b>Ethnicity</b>	<b><i>n</i></b>	<b>Percent</b>
New Zealand European	4647	53.3%
Māori	626	7.2%
Samoan	97	1.1%
Cook Islands Māori	15	0.2%
Tongan	50	0.6%
Niuean	10	0.1%
Chinese	896	10.3%
Indian	419	4.8%
Other	1596	18.3%
Multiple	363	4.2%
Total	8719	100%

## University Demographic Variables

### Degree level & NZQA level

The Universities provided us with the name of each student's potential qualification, e.g., Bachelor of Arts. Each course was assigned to a degree type and NZQA study level according to the New Zealand Qualifications Framework (NZQF). The following table shows the qualification types that fall under each NZQA level.

**Table 1.08. Qualification type and corresponding NZQA level**

NZQA level	Qualification type
Level 7	Bachelor's degree
	Bachelor's degree + diploma
	Conjoint bachelor's degree
	Certificate/diploma
	Graduate certificate/graduate diploma
Level 8	Bachelor's degree with honours
	Conjoint bachelor's degree with honours
	Postgraduate certificate/postgraduate diploma
Level 9	Master's degree
Level 10	PhD
	Other doctorate

### Degree level × NZQA level

The following table shows the distribution of NZQA levels within the broader degree level categories of "undergraduate" and "postgraduate."

**Table 1.09. Degree level by NZQA level**

NZQA level	Degree level		Total
	Undergraduate	Postgraduate	
Level 7	5140 (100%)		5140 (59.0%)
Level 8		1990 (55.6%)	1990 (22.8%)
Level 9		1148 (32.1%)	1148 (13.2%)
Level 10		435 (12.2%)	435 (5.0%)
Unclear		6 (0.2%)	6 (0.1%)
Total	5140 (59.0%)	3579 (41.0%)	8719 (100%)

Note:

- 'Total' percentages are expressed as proportions of the total sample ( $n = 8,719$ ). All other percentages are expressed as proportions of the column total.
- Any further tables describing qualification level will refer to NZQA level rather than degree level.

## Degree type

**Table 1.10. Students' degree types**

Degree type	<i>n</i>	Percent
Bachelor's degree	4081	46.8%
Conjoint bachelor's degree	156	1.8%
Bachelor's degree + diploma	30	0.3%
Certificate/Diploma	8	0.1%
Graduate certificate/diploma	863	9.9%
Honour's degree	671	7.7%
Conjoint honour's degree	4	0.05%
Postgraduate certificate/diploma	1315	15.1%
Master's degree	1148	13.2%
PhD	416	4.8%
Doctorate - other	19	0.2%
Unclear	8	0.1%
Total	8719	100%

## Study domain

The Universities also provided us with the major subject area (study domain) for each student's qualification. Note that the Universities had difficulty assigning PhD qualifications to study domains, hence PhDs are classified as 'PhD.'

**Table 1.11. Study domains of students' qualifications**

Study domain	<i>n</i>	Percent
Agriculture/Horticulture	168	1.9%
Commerce/Business	1740	20.0%
Education	1070	12.3%
Health Sciences	858	9.8%
Humanities/Arts/Social Sciences	2202	25.3%
Law	155	1.8%
Sciences/Engineering	1768	20.3%
PhD	416	4.8%
Unclear	342	3.9%
Total	8719	100%

Note:

- 'Unclear' includes certificates/diplomas where the domain is not known, conjoint degrees that fall into two domains, interdivisional qualifications that do not fall into any specific domain or fall into multiple domains, and other degrees for which the domain is unclear.



## EFTS

The Universities provided us with information regarding whether each student was studying full-time or part-time. Full-time students were defined as those enrolled in a programme study for the full year at 1 EFTS or for one semester at 0.5 EFTS. Part-time students were defined as those who did not meet the aforementioned requirements.

**Table 1.12. EFTS groupings of students' qualifications**

<b>EFTS</b>	<b><i>n</i></b>	<b>Percent</b>
Full-time	5497	63.0%
Part-time	3154	36.2%
Unclear	68	0.8%
Total	8719	100%

Because one university defined full-time students as those studying at 0.8 EFTS or above, the following table displays the distribution of full- and part-time students excluding all students from that university.

**Table 1.13. EFTS groupings of students' qualifications, excluding non-criterion university**

<b>EFTS</b>	<b><i>n</i></b>	<b>Percent</b>
Full-time	4594	63.8%
Part-time	2533	35.2%
Unclear	68	0.9%
Total	7195	100%

## Mode of study

The Universities provided us with information regarding whether each student studied intramurally or extramurally.

**Table 1.14. Students' mode of study**

<b>Mode of study</b>	<b><i>n</i></b>	<b>Percent</b>
Extramural	977	11.2%
Intramural	7742	88.8%
Total	8719	100%

### Student status & citizenship

The Universities provided us with information regarding whether or not each student was a domestic student or an international student.

**Table 1.15. Domestic vs. international student status**

Student status	<i>n</i>	Percent
Domestic	7715	88.5%
International	1004	11.5%
Total	8719	100%

In the survey, respondents were asked to indicate their citizenship/residency status.

**Table 1.16. Citizenship/residency status**

Citizenship status	<i>n</i>	Percent
NZ citizen/permanent resident	7348	84.3%
Australian citizen/permanent resident	88	1.0%
International citizenship	951	10.9%
Multiple citizenship	320	3.7%
Skipped question	12	0.1%
Total	8719	100%

**Table 1.17. Student status by citizenship/residency status**

Citizenship status	Student status				Total	
	Domestic		International			
NZ citizen/permanent resident	7310	(94.8%)	38	(3.8%)	7348	(84.3%)
Australian citizen/permanent resident	85	(1.1%)	3	(0.3%)	88	(1.0%)
International citizenship	3	(0.04%)	948	(94.4%)	951	(10.9%)
Multiple citizenship	312	(4.0%)	8	(0.8%)	320	(3.7%)
Skipped question	5	(0.1%)	7	(0.7%)	12	(0.1%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

Note:

- 'Total' percentages are expressed as proportions of the total sample ( $n = 8,719$ ). All other percentages are expressed as proportions of the column total.
- In all further tables, student status (domestic or international) as nominated by the universities will be used given that they are most likely to have accurate information regarding whether students are paying international or domestic fees.

### International PhD students

All NZQA level 10 students have been included in the PhD group – this includes PhD students and other doctoral students.

**Table 1.18. PhD student status**

Degree type	Student status				Total	
	Domestic PhD		International PhD			
PhD	205	(91.9%)	211	(99.5%)	416	(95.6%)
Doctorate – other	18	(8.1%)	1	(0.5%)	19	(4.4%)
Total	223	(51.3%)	212	(48.7%)	435	(100%)

Note:

- ‘Total’ percentages are expressed as proportions of the total sample ( $n = 8,719$ ). All other percentages are expressed as proportions of the column total.
- ‘Doctorate – other’ qualifications included: Doctor of Business and Administration ( $n = 1$ ), Doctor of Clinical Dentistry ( $n = 6$ ), Doctor of Clinical Psychology ( $n = 6$ ), Doctor of Education ( $n = 5$ ), Doctor of Musical Arts ( $n = 1$ ).

## Further Tables

In the tables that follow, demographic variables from those described above (sex, age, ethnicity, NZQA level, degree type, study domain, EFTS, method, student status) have been compared with other demographic variables. Note that, for all tables, 'Total' percentages are expressed as proportions of the total sample ( $N = 8,719$ ). All other percentages are expressed as proportions of the row total (except where stated otherwise).

**Table 1.19. Sex of participants by age of participants**

Age band	Sex		Total
	Male	Female	
15-19 years	5 (29.4%)	12 (70.6%)	17 (0.2%)
20-24 years	1689 (36.3%)	2968 (63.7%)	4657 (53.4%)
25-29 years	638 (42.7%)	855 (57.3%)	1493 (17.1%)
30-34 years	321 (42.5%)	435 (57.5%)	756 (8.7%)
35-39 years	210 (38.7%)	333 (61.3%)	543 (6.2%)
40-44 years	143 (34.5%)	272 (65.5%)	415 (4.8%)
45-49 years	111 (32.6%)	229 (67.4%)	340 (3.9%)
50-54 years	74 (27.9%)	191 (72.1%)	265 (3.0%)
55-59 years	50 (32.7%)	103 (67.3%)	153 (1.8%)
60-64 years	23 (41.8%)	32 (58.2%)	55 (0.6%)
65-69 years	7 (53.8%)	6 (46.2%)	13 (0.1%)
70+ years	10 (83.3%)	2 (16.7%)	12 (0.1%)
Total	3281 (37.6%)	5438 (62.4%)	8719 (100%)

**Table 1.20. Sex of participants by ethnicity of participants**

Ethnicity	Sex		Total
	Male	Female	
NZ European	1632 (35.1%)	3015 (64.9%)	4647 (53.3%)
Māori	180 (28.8%)	446 (71.2%)	626 (7.2%)
Samoan	27 (27.8%)	70 (72.2%)	97 (1.1%)
Cook Islands Māori	4 (26.7%)	11 (73.3%)	15 (0.2%)
Tongan	17 (34.0%)	33 (66.0%)	50 (0.6%)
Niuean	3 (30.0%)	7 (70.0%)	10 (0.1%)
Chinese	400 (44.6%)	496 (55.4%)	896 (10.3%)
Indian	216 (51.6%)	203 (48.4%)	419 (4.8%)
Other	680 (42.6%)	916 (57.4%)	1596 (18.3%)
Multiple	122 (33.6%)	241 (66.4%)	363 (4.2%)
Total	3281 (37.6%)	5438 (62.4%)	8719 (100%)

**Table 1.21. Sex of participants by NZQA level**

NZQA level	Sex					
	Male		Female		Total	
Level 7	1820	(35.4%)	3320	(64.6%)	5140	(59.0%)
Level 8	757	(38.0%)	1233	(62.0%)	1990	(22.8%)
Level 9	488	(42.5%)	660	(57.5%)	1148	(13.2%)
Level 10	211	(48.5%)	224	(51.5%)	435	(5.0%)
Unclear	5	(83.3%)	1	(16.7%)	6	(0.1%)
Total	3281	(37.6%)	5438	(62.4%)	8719	(100%)

**Table 1.22. Sex of participants by degree type**

Degree type	Sex					
	Male		Female		Total	
Bachelor's degree	1426	(34.9%)	2655	(65.1%)	4081	(46.8%)
Conjoint bachelor's degree	54	(34.6%)	102	(65.4%)	156	(1.8%)
Bachelor's degree + diploma	5	(16.7%)	25	(83.3%)	30	(0.3%)
Certificate/Diploma			8	(100%)	8	(0.1%)
Graduate certificate/diploma	334	(38.7%)	529	(61.3%)	863	(9.9%)
Honour's degree	295	(44.0%)	376	(56.0%)	671	(7.7%)
Conjoint honours degree	2	(50.0%)	2	(50.0%)	4	(0.05%)
Postgraduate certificate/diploma	460	(35.0%)	855	(65.0%)	1315	(15.1%)
Master's degree	488	(42.5%)	660	(57.5%)	1148	(13.2%)
PhD	202	(48.6%)	214	(51.4%)	416	(4.8%)
Doctorate - other	9	(47.4%)	10	(52.6%)	19	(0.2%)
Unclear	6	(75.0%)	2	(25.0%)	8	(0.1%)
Total	3281	(37.6%)	5438	(62.4%)	8719	(100%)

**Table 1.23. Sex of participants by study domain**

Study domain	Sex					
	Male		Female		Total	
Agriculture/Horticulture	83	(49.4%)	85	(50.6%)	168	(1.9%)
Commerce/Business	840	(48.3%)	900	(51.7%)	1740	(20.0%)
Education	208	(19.4%)	862	(80.6%)	1070	(12.3%)
Health Sciences	189	(22.0%)	669	(78.0%)	858	(9.8%)
Humanities/Arts/Social Sciences	701	(31.8%)	1501	(68.2%)	2202	(25.3%)
Law	47	(30.3%)	108	(69.7%)	155	(1.8%)
Sciences/Engineering	876	(49.5%)	892	(50.5%)	1768	(20.3%)
PhD	202	(48.6%)	214	(51.4%)	416	(4.8%)
Other	135	(39.5%)	207	(60.5%)	342	(3.9%)
Total	3281	(37.6%)	5438	(62.4%)	8719	(100%)

**Table 1.24. Sex of participants by EFTS**

Total sample:

<b>EFTS</b>	<b>Sex</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Full-time	2043 (37.2%)	3454 (62.8%)	5497 (63.0%)
Part-time	1210 (38.4%)	1944 (61.6%)	3154 (36.2%)
Unclear	28 (41.2%)	40 (58.8%)	68 (0.8%)
Total	3281 (37.6%)	5438 (62.4%)	8719 (100%)

Sample excluding non-criterion university:

<b>EFTS</b>	<b>Sex</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Full-time	1725 (37.5%)	2869 (62.5%)	4594 (63.8%)
Part-time	966 (38.1%)	1567 (61.9%)	2533 (35.2%)
Unclear	28 (41.2%)	40 (58.8%)	68 (0.9%)
Total	2719 (37.8%)	4476 (62.2%)	7195 (100%)

**Table 1.25. Sex of participants by mode of study**

<b>Mode of study</b>	<b>Sex</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Extramural	264 (27.0%)	713 (73.0%)	977 (11.2%)
Intramural	3017 (39.0%)	4725 (61.0%)	7742 (88.8%)
Total	3281 (37.6%)	5438 (62.4%)	8719 (100%)

**Table 1.26. Sex of participants by student status**

<b>Student status</b>	<b>Sex</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Domestic	2759 (35.8%)	4956 (64.2%)	7715 (88.5%)
International	522 (52.0%)	482 (48.0%)	1004 (11.5%)
Total	3281 (37.6%)	5438 (62.4%)	8719 (100%)

**Table 1.27. Sex of participants by PhD student status**

<b>Student status</b>	<b>Sex</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Domestic PhD	94 (42.2%)	129 (57.8%)	223 (51.3%)
International PhD	117 (55.2%)	95 (44.8%)	212 (48.7%)
Total	211 (48.5%)	224 (51.5%)	435 (100%)

**Table 1.28. Age of participants by ethnicity**

Age band	Ethnicity										Total
	NZ European	Māori	Samoan	Cook Islands Māori	Tongan	Niuean	Chinese	Indian	Other	Multiple	
15-19 years	7 (41.2%)	5 (29.4%)	1 (5.9%)				1 (5.9%)	1 (5.9%)	2 (11.8%)		17 (0.2%)
20-24 years	2765 (59.4%)	306 (6.6%)	43 (0.9%)	9 (0.2%)	18 (0.4%)	5 (0.1%)	467 (10.0%)	209 (4.5%)	600 (12.9%)	235 (5.0%)	4657 (53.4%)
25-29 years	584 (39.1%)	104 (7.0%)	19 (1.3%)	1 (0.1%)	11 (0.7%)	1 (0.1%)	287 (19.2%)	106 (7.1%)	314 (21.0%)	66 (4.4%)	1493 (17.1%)
30-34 years	280 (37.0%)	61 (8.1%)	7 (0.9%)	1 (0.1%)	6 (0.8%)		73 (9.7%)	53 (7.0%)	257 (34.0%)	18 (2.4%)	756 (8.7%)
35-39 years	256 (47.1%)	39 (7.2%)	10 (1.8%)	1 (0.2%)	9 (1.7%)	1 (0.2%)	28 (5.2%)	23 (4.2%)	159 (29.3%)	17 (3.1%)	543 (6.2%)
40-44 years	206 (49.6%)	44 (10.6%)	9 (2.2%)	1 (0.2%)	3 (0.7%)	2 (0.5%)	18 (4.3%)	13 (3.1%)	109 (26.3%)	10 (2.4%)	415 (4.8%)
45-49 years	201 (59.1%)	26 (7.6%)	4 (1.2%)		1 (0.3%)	1 (0.3%)	12 (3.5%)	6 (1.8%)	83 (24.4%)	6 (1.8%)	340 (3.9%)
50-54 years	180 (67.9%)	20 (7.5%)	2 (0.8%)	1 (0.4%)	1 (0.4%)		6 (2.3%)	3 (1.1%)	46 (17.4%)	6 (2.3%)	265 (3.0%)
55-59 years	111 (72.5%)	15 (9.8%)					4 (2.6%)	3 (2.0%)	15 (9.8%)	5 (3.3%)	153 (1.8%)
60-64 years	38 (69.1%)	4 (7.3%)	1 (1.8%)	1 (1.8%)	1 (1.8%)			2 (3.6%)	8 (14.5%)		55 (0.6%)
65-69 years	9 (69.2%)	1 (7.7%)	1 (7.7%)						2 (15.4%)		13 (0.1%)
70+ years	10 (83.3%)	1 (8.3%)							1 (8.3%)		12 (0.1%)
Total	4647 (53.3%)	626 (7.2%)	97 (1.1%)	15 (0.2%)	50 (0.6%)	10 (0.1%)	896 (10.3%)	419 (4.8%)	1596 (18.3%)	363 (4.2%)	8719 (100%)

**Table 1.29. Age of participants by NZQA level**

Age band	NZQA level					Unclear	Total
	Level 7	Level 8	Level 9	Level 10			
15-19 years	16 (94.1%)		1 (5.9%)				17 (0.2%)
20-24 years	3522 (75.6%)	847 (18.2%)	282 (6.1%)	2 (0.04%)	4 (0.1%)		4657 (53.4%)
25-29 years	693 (46.4%)	377 (25.3%)	329 (22.0%)	92 (6.2%)	2 (0.1%)		1493 (17.1%)
30-34 years	270 (35.7%)	195 (25.8%)	158 (20.9%)	133 (17.6%)			756 (8.7%)
35-39 years	201 (37.0%)	162 (29.8%)	97 (17.9%)	83 (15.3%)			543 (6.2%)
40-44 years	153 (36.9%)	130 (31.3%)	91 (21.9%)	41 (9.9%)			415 (4.8%)
45-49 years	121 (35.6%)	116 (34.1%)	79 (23.2%)	24 (7.1%)			340 (3.9%)
50-54 years	89 (33.6%)	95 (35.8%)	59 (22.3%)	22 (8.3%)			265 (3.0%)
55-59 years	49 (32.0%)	48 (31.4%)	34 (22.2%)	22 (14.4%)			153 (1.8%)
60-64 years	20 (36.4%)	13 (23.6%)	14 (25.5%)	8 (14.5%)			55 (0.6%)
65-69 years	4 (30.8%)	5 (38.5%)	2 (15.4%)	2 (15.4%)			13 (0.1%)
70+ years	2 (16.7%)	2 (16.7%)	2 (16.7%)	6 (50.0%)			12 (0.1%)
Total	5140 (59.0%)	1990 (22.8%)	1148 (13.2%)	435 (5.0%)	6 (0.1%)		8719 (100%)



**Table 1.30. Age of participants by degree type**

Age band	Degree type												Total
	Bachelor's	Conjoint bachelor's	Bachelor's + dipl.	Cert./ dipl.	Grad. cert./ dipl.	Honour's	Conjoint honour's	Postgrad. cert./ dipl.	Master's	PhD	Doctorate	Unclear	
15-19 years	15 (88.2%)				1 (5.9%)				1 (5.9%)				17 (0.2%)
20-24 years	3131 (67.2%)	135 (2.9%)	23 (0.5%)	1 (0.02%)	230 (4.9%)	562 (12.1%)	3 (0.1%)	282 (6.1%)	282 (6.1%)	2 (0.04%)		6 (0.1%)	4657 (53.4%)
25-29 years	472 (31.6%)	10 (0.7%)	1 (0.1%)	4 (0.3%)	206 (13.8%)	57 (3.8%)	1 (0.1%)	319 (21.4%)	329 (22.0%)	89 (6.0%)	3 (0.2%)	2 (0.1%)	1493 (17.1%)
30-34 years	149 (19.7%)	4 (0.5%)	1 (0.1%)		116 (15.3%)	18 (2.4%)		177 (23.4%)	158 (20.9%)	126 (16.7%)	7 (0.9%)		756 (8.7%)
35-39 years	106 (19.5%)	5 (0.9%)	3 (0.6%)	2 (0.4%)	85 (15.7%)	12 (2.2%)		150 (27.6%)	97 (17.9%)	81 (14.9%)	2 (0.4%)		543 (6.2%)
40-44 years	86 (20.7%)	1 (0.2%)	2 (0.5%)		64 (15.4%)	7 (1.7%)		123 (29.6%)	91 (21.9%)	39 (9.4%)	2 (0.5%)		415 (4.8%)
45-49 years	57 (16.8%)				64 (18.8%)	6 (1.8%)		110 (32.4%)	79 (23.2%)	23 (6.8%)	1 (0.3%)		340 (3.9%)
50-54 years	34 (12.8%)				55 (20.8%)	4 (1.5%)		91 (34.3%)	59 (22.3%)	19 (7.2%)	3 (1.1%)		265 (3.0%)
55-59 years	18 (11.8%)	1 (0.7%)		1 (0.7%)	29 (19.0%)	4 (2.6%)		44 (28.8%)	34 (22.2%)	22 (14.4%)			153 (1.8%)
60-64 years	11 (20.0%)				9 (16.4%)			13 (23.6%)	14 (25.5%)	8 (14.5%)			55 (0.6%)
65-69 years	1 (7.7%)				3 (23.1%)	1 (7.7%)		4 (30.8%)	2 (15.4%)	2 (15.4%)			13 (0.1%)
70+ years	1 (8.3%)				1 (8.3%)			2 (16.7%)	2 (16.7%)	5 (41.7%)	1 (8.3%)		12 (0.1%)
Total	4081 (46.8%)	156 (1.8%)	30 (0.3%)	8 (0.1%)	863 (9.9%)	671 (7.7%)	4 (0.05%)	1315 (15.1%)	1148 (13.2%)	416 (4.8%)	19 (0.2%)	8 (0.1%)	8719 (100%)

**Table 1.31. Age of participants by study domain**

Age band	Study domain									Total
	Agriculture/ Horticulture	Commerce/ Business	Education	Health Sciences	Humanities/ Arts/ Social Sciences	Law	Sciences/ Engineering	PhD	Unclear	
15-19 years	5 (29.4%)	5 (29.4%)	2 (11.8%)		3 (17.6%)		2 (11.8%)		(3.8%)	17 (0.2%)
20-24 years	96 (2.1%)	930 (20.0%)	361 (7.8%)	383 (8.2%)	1422 (30.5%)	95 (2.0%)	1192 (25.6%)	2 (0.04%)	176 (3.2%)	4657 (53.4%)
25-29 years	28 (1.9%)	331 (22.2%)	170 (11.4%)	147 (9.8%)	328 (22.0%)	25 (1.7%)	327 (21.9%)	89 (6.0%)	48 (3.0%)	1493 (17.1%)
30-34 years	13 (1.7%)	160 (21.2%)	106 (14.0%)	84 (11.1%)	120 (15.9%)	13 (1.7%)	111 (14.7%)	126 (16.7%)	23 (4.6%)	756 (8.7%)
35-39 years	8 (1.5%)	92 (16.9%)	127 (23.4%)	62 (11.4%)	97 (17.9%)	5 (0.9%)	46 (8.5%)	81 (14.9%)	25 (5.1%)	543 (6.2%)
40-44 years	10 (2.4%)	70 (16.9%)	108 (26.0%)	64 (15.4%)	64 (15.4%)	5 (1.2%)	34 (8.2%)	39 (9.4%)	21 (7.6%)	415 (4.8%)
45-49 years	2 (0.6%)	72 (21.2%)	78 (22.9%)	46 (13.5%)	63 (18.5%)	5 (1.5%)	25 (7.4%)	23 (6.8%)	26 (4.9%)	340 (3.9%)
50-54 years	2 (0.8%)	48 (18.1%)	66 (24.9%)	48 (18.1%)	46 (17.4%)	4 (1.5%)	19 (7.2%)	19 (7.2%)	13 (5.9%)	265 (3.0%)
55-59 years	4 (2.6%)	22 (14.4%)	37 (24.2%)	19 (12.4%)	27 (17.6%)	1 (0.7%)	12 (7.8%)	22 (14.4%)	9 (1.8%)	153 (1.8%)
60-64 years		8 (14.5%)	13 (23.6%)	4 (7.3%)	20 (36.4%)	1 (1.8%)		8 (14.5%)	1	55 (0.6%)
65-69 years			2 (15.4%)	1 (7.7%)	8 (61.5%)			2 (15.4%)		13 (0.1%)
70+ years		2 (16.7%)			4 (33.3%)	1 (8.3%)		5 (41.7%)		12 (0.1%)
Total	168 (1.9%)	1740 (20.0%)	1070 (12.3%)	858 (9.8%)	2202 (25.3%)	155 (1.8%)	1768 (20.3%)	416 (4.8%)	342 (3.9%)	8719 (100%)

**Table 1.32. Ethnicity of participants by NZQA level**

Ethnicity	NZQA level									
	Level 7		Level 8		Level 9		Level 10		Unclear	
	Total		Total		Total		Total		Total	
NZ European	2921	(62.9%)	1036	(22.3%)	552	(11.9%)	134	(2.9%)	4	(0.1%)
Māori	422	(67.4%)	117	(18.7%)	71	(11.3%)	16	(2.6%)		
Samoan	58	(59.8%)	22	(22.7%)	17	(17.5%)				
Cook Islands Māori	11	(73.3%)	2	(13.3%)	2	(13.3%)				
Tongan	32	(64.0%)	12	(24.0%)	3	(6.0%)	3	(6.0%)		
Niuean	6	(60.0%)	4	(40.0%)						
Chinese	490	(54.7%)	221	(24.7%)	158	(17.6%)	27	(3.0%)		
Indian	172	(41.1%)	130	(31.0%)	80	(19.1%)	37	(8.8%)		
Other	775	(48.6%)	374	(23.4%)	235	(14.7%)	210	(13.2%)	2	(0.1%)
Multiple	253	(69.7%)	72	(19.8%)	30	(8.3%)	8	(2.2%)		
Total	5140	(59.0%)	1990	(22.8%)	1148	(13.2%)	435	(5.0%)	6	(0.1%)

**Table 1.33. Age of participants by EFTS**

Total sample:

Age band	EFTS			Total
	Full-time	Part-time	Unclear	
15-19 years	16 (94.1%)	1 (5.9%)		17 (0.2%)
20-24 years	3601 (77.3%)	1048 (22.5%)	8 (0.2%)	4657 (53.4%)
25-29 years	905 (60.6%)	572 (38.3%)	16 (1.1%)	1493 (17.1%)
30-34 years	353 (46.7%)	386 (51.1%)	17 (2.2%)	756 (8.7%)
35-39 years	232 (42.7%)	300 (55.2%)	11 (2.0%)	543 (6.2%)
40-44 years	151 (36.4%)	258 (62.2%)	6 (1.4%)	415 (4.8%)
45-49 years	103 (30.3%)	233 (68.5%)	4 (1.2%)	340 (3.9%)
50-54 years	71 (26.8%)	191 (72.1%)	3 (1.1%)	265 (3.0%)
55-59 years	47 (30.7%)	103 (67.3%)	3 (2.0%)	153 (1.8%)
60-64 years	9 (16.4%)	46 (83.6%)		55 (0.6%)
65-69 years	2 (15.4%)	11 (84.6%)		13 (0.1%)
70+ years	7 (58.3%)	5 (41.7%)		12 (0.1%)
Total	5497 (63.0%)	3154 (36.2%)	68 (0.8%)	8719 (100%)

Sample excluding non-criterion university:

Age band	EFTS			Total
	Full-time	Part-time	Unclear	
15-19 years	9 (100%)			9 (0.1%)
20-24 years	3166 (76.8%)	948 (23.0%)	8 (0.2%)	4122 (57.3%)
25-29 years	724 (60.5%)	457 (38.2%)	16 (1.3%)	1197 (16.6%)
30-34 years	265 (46.0%)	294 (51.0%)	17 (3.0%)	576 (8.0%)
35-39 years	162 (41.3%)	219 (55.9%)	11 (2.8%)	392 (5.4%)
40-44 years	101 (33.2%)	197 (64.8%)	6 (2.0%)	304 (4.2%)
45-49 years	75 (31.5%)	159 (66.8%)	4 (1.7%)	238 (3.3%)
50-54 years	51 (25.9%)	143 (72.6%)	3 (1.5%)	197 (2.7%)
55-59 years	36 (31.0%)	77 (66.4%)	3 (2.6%)	116 (1.6%)
60-64 years	3 (9.7%)	28 (90.3%)		31 (0.4%)
65-69 years	1 (12.5%)	7 (87.5%)		8 (0.1%)
70+ years	1 (20.0%)	4 (80.0%)		5 (0.1%)
Total	4594 (63.8%)	2533 (35.2%)	68 (0.9%)	7195 (100%)

**Table 1.34. Age of participants by mode of study**

Age band	Mode of study					
	Extramural		Intramural		Total	
15-19 years	2	(11.8%)	15	(88.2%)	17	(0.2%)
20-24 years	153	(3.3%)	4504	(96.7%)	4657	(53.4%)
25-29 years	164	(11.0%)	1329	(89.0%)	1493	(17.1%)
30-34 years	141	(18.7%)	615	(81.3%)	756	(8.7%)
35-39 years	136	(25.0%)	407	(75.0%)	543	(6.2%)
40-44 years	123	(29.6%)	292	(70.4%)	415	(4.8%)
45-49 years	111	(32.6%)	229	(67.4%)	340	(3.9%)
50-54 years	83	(31.3%)	182	(68.7%)	265	(3.0%)
55-59 years	39	(25.5%)	114	(74.5%)	153	(1.8%)
60-64 years	17	(30.9%)	38	(69.1%)	55	(0.6%)
65-69 years	5	(38.5%)	8	(61.5%)	13	(0.1%)
70+ years	3	(25.0%)	9	(75.0%)	12	(0.1%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

**Table 1.35. Age of participants by student status**

Age band	Student status					
	Domestic		International		Total	
15-19 years	17	(100%)			17	(0.2%)
20-24 years	4299	(92.3%)	358	(7.7%)	4657	(53.4%)
25-29 years	1170	(78.4%)	323	(21.6%)	1493	(17.1%)
30-34 years	588	(77.8%)	168	(22.2%)	756	(8.7%)
35-39 years	454	(83.6%)	89	(16.4%)	543	(6.2%)
40-44 years	381	(91.8%)	34	(8.2%)	415	(4.8%)
45-49 years	324	(95.3%)	16	(4.7%)	340	(3.9%)
50-54 years	257	(97.0%)	8	(3.0%)	265	(3.0%)
55-59 years	151	(98.7%)	2	(1.3%)	153	(1.8%)
60-64 years	51	(92.7%)	4	(7.3%)	55	(0.6%)
65-69 years	12	(92.3%)	1	(7.7%)	13	(0.1%)
70+ years	11	(91.7%)	1	(8.3%)	12	(0.1%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

**Table 1.36. Age of participants by PhD student status**

Age band	Student status		Total
	Domestic PhD	International PhD	
15-19 years			
20-24 years	1 (50.0%)	1 (50.0%)	2 (0.5%)
25-29 years	57 (62.0%)	35 (38.0%)	92 (21.1%)
30-34 years	46 (34.6%)	87 (65.4%)	133 (30.6%)
35-39 years	31 (37.3%)	52 (62.7%)	83 (19.1%)
40-44 years	23 (56.1%)	18 (43.9%)	41 (9.4%)
45-49 years	14 (58.3%)	10 (41.7%)	24 (5.5%)
50-54 years	16 (72.7%)	6 (27.3%)	22 (5.1%)
55-59 years	21 (95.5%)	1 (4.5%)	22 (5.1%)
60-64 years	7 (87.5%)	1 (12.5%)	8 (1.8%)
65-69 years	2 (100%)		2 (0.5%)
70+ years	5 (83.3%)	1 (16.7%)	6 (1.4%)
Total	223 (51.3%)	212 (48.7%)	435 (100%)

**Table 1.37. Ethnicity of participants by degree type**

Degree type	Ethnicity										Total
	NZ European	Māori	Samoan	Cook Islands Māori	Tongan	Niuean	Chinese	Indian	Other	Multiple	
Bachelor's	2290 (56.1%)	351 (8.6%)	51 (1.2%)	11 (0.3%)	30 (0.7%)	6 (0.1%)	387 (9.5%)	137 (3.4%)	611 (15.0%)	207 (5.1%)	4081 (46.8%)
Conjoint bachelor's	96 (61.5%)	12 (7.7%)	2 (1.3%)				21 (13.5%)	5 (3.2%)	12 (7.7%)	8 (5.1%)	156 (1.8%)
Bachelor's + dipl.	27 (90.0%)	3 (10.0%)									30 (0.3%)
Cert./Dipl.	3 (37.5%)						2 (25.0%)		2 (25.0%)	1 (12.5%)	8 (0.1%)
Grad. Cert./dipl.	503 (58.3%)	56 (6.5%)	5 (0.6%)		2 (0.2%)		80 (9.3%)	30 (3.5%)	150 (17.4%)	37 (4.3%)	863 (9.9%)
Honour's	417 (62.1%)	33 (4.9%)	3 (0.4%)				65 (9.7%)	24 (3.6%)	97 (14.5%)	32 (4.8%)	671 (7.7%)
Conjoint honour's	3 (75.0%)									1 (25.0%)	4 (0.05%)
Postgrad. cert./dipl.	616 (46.8%)	84 (6.4%)	19 (1.4%)	2 (0.2%)	12 (0.9%)	4 (0.3%)	156 (11.9%)	106 (8.1%)	277 (21.1%)	39 (3.0%)	1315 (15.1%)
Master's	552 (48.1%)	71 (6.2%)	17 (1.5%)	2 (0.2%)	3 (0.3%)		158 (13.8%)	80 (7.0%)	235 (20.5%)	30 (2.6%)	1148 (13.2%)
PhD	126 (30.3%)	15 (3.6%)			3 (0.7%)		25 (6.0%)	35 (8.4%)	205 (49.3%)	7 (1.7%)	416 (4.8%)
Doctorate	8 (42.1%)	1 (5.3%)					2 (10.5%)	2 (10.5%)	5 (26.3%)	1 (5.3%)	19 (0.2%)
Unclear	6 (75.0%)								2 (25.0%)		8 (0.1%)
Total	4647 (53.3%)	626 (7.2%)	97 (1.1%)	15 (0.2%)	50 (0.6%)	10 (0.1%)	896 (10.3%)	419 (4.8%)	1596 (18.3%)	363 (4.2%)	8719 (100%)

**Table 1.38. Ethnicity of participants by study domain**

	Study domain										
	Agriculture/ Horticulture	Commerce/ Business	Education	Health Sciences	Humanities/ Arts/ Social Sciences	Law	Sciences/ Engineering	PhD	Unclear	Total	
NZ European	115 (2.5%)	801 (17.2%)	678 (14.6%)	417 (9.0%)	1296 (27.9%)	98 (2.1%)	924 (19.9%)	126 (2.7%)	192 (4.1%)	4647 (53.3%)	
Māori	7 (1.1%)	106 (16.9%)	104 (16.6%)	65 (10.4%)	200 (31.9%)	17 (2.7%)	85 (13.6%)	15 (2.4%)	27 (4.3%)	626 (7.2%)	
Samoan		12 (12.4%)	18 (18.6%)	10 (10.3%)	37 (38.1%)	6 (6.2%)	9 (9.3%)		5 (5.2%)	97 (1.1%)	
Cook Is. Māori		3 (20.0%)	4 (26.7%)	3 (20.0%)	2 (13.3%)	1 (6.7%)	2 (13.3%)			15 (0.2%)	
Tongan		12 (24.0%)	9 (18.0%)	7 (14.0%)	14 (28.0%)	1 (2.0%)	4 (8.0%)	3 (6.0%)		50 (0.6%)	
Niuean		1 (10.0%)	4 (40.0%)	1 (10.0%)	2 (20.0%)		2 (20.0%)			10 (0.1%)	
Chinese	6 (0.7%)	322 (35.9%)	20 (2.2%)	79 (8.8%)	147 (16.4%)	5 (0.6%)	247 (27.6%)	25 (2.8%)	45 (5.0%)	896 (10.3%)	
Indian	7 (1.7%)	141 (33.7%)	22 (5.3%)	47 (11.2%)	42 (10.0%)	1 (0.2%)	109 (26.0%)	35 (8.4%)	15 (3.6%)	419 (4.8%)	
Other	31 (1.9%)	282 (17.7%)	152 (9.5%)	190 (11.9%)	360 (22.6%)	15 (0.9%)	315 (19.7%)	205 (12.8%)	46 (2.9%)	1596 (18.3%)	
Multiple	2 (0.6%)	60 (16.5%)	59 (16.3%)	39 (10.7%)	102 (28.1%)	11 (3.0%)	71 (19.6%)	7 (1.9%)	12 (3.3%)	363 (4.2%)	
Total	168 (1.9%)	1740 (20.0%)	1070 (12.3%)	858 (9.8%)	2202 (25.3%)	155 (1.8%)	1768 (20.3%)	416 (4.8%)	342 (3.9%)	8719 (100%)	



**Table 1.39. Ethnicity of participants by EFTS**

Total sample:

Total sample		EFTS						
Ethnicity	Full-time		Part-time		Unclear		Total	
NZ European	2979	(64.1%)	1645	(35.4%)	23	(0.5%)	4647	(53.3%)
Māori	396	(63.3%)	229	(36.6%)	1	(0.2%)	626	(7.2%)
Samoan	44	(45.4%)	53	(54.6%)			97	(1.1%)
Cook Islands Māori	9	(60.0%)	6	(40.0%)			15	(0.2%)
Tongan	31	(62.0%)	19	(38.0%)			50	(0.6%)
Niuean	4	(40.0%)	6	(60.0%)			10	(0.1%)
Chinese	552	(61.6%)	338	(37.7%)	6	(0.7%)	896	(10.3%)
Indian	275	(65.6%)	139	(33.2%)	5	(1.2%)	419	(4.8%)
Other	951	(59.6%)	613	(38.4%)	32	(2.0%)	1596	(18.3%)
Multiple	256	(70.5%)	106	(29.2%)	1	(0.3%)	363	(4.2%)
Total	5497	(63.0%)	3154	(36.2%)	68	(0.8%)	8719	(100%)

Sample excluding non-criterion university:

	EFTS							
Ethnicity	Full-time		Part-time		Unclear		Total	
NZ European	2456	(65.5%)	1270	(33.9%)	23	(0.6%)	3749	(52.1%)
Māori	339	(65.3%)	179	(34.5%)	1	(0.2%)	519	(7.2%)
Samoan	38	(43.2%)	50	(56.8%)			88	(1.2%)
Cook Islands Māori	9	(60.0%)	6	(40.0%)			15	(0.2%)
Tongan	30	(63.8%)	17	(36.2%)			47	(0.7%)
Niuean	4	(44.4%)	5	(55.6%)			9	(0.1%)
Chinese	454	(60.9%)	286	(38.3%)	6	(0.8%)	746	(10.4%)
Indian	234	(66.1%)	115	(32.5%)	5	(1.4%)	354	(4.9%)
Other	793	(59.4%)	510	(38.2%)	32	(2.4%)	1335	(18.6%)
Multiple	237	(71.2%)	95	(28.5%)	1	(0.3%)	333	(4.6%)
Total	4594	(63.8%)	2533	(35.2%)	68	(0.9%)	7195	(100%)

**Table 1.40. Ethnicity of participants by mode of study**

Ethnicity	Mode of study				Total	
	Extramural		Intramural			
NZ European	618	(13.3%)	4029	(86.7%)	4647	(53.3%)
Māori	95	(15.2%)	531	(84.8%)	626	(7.2%)
Samoan	11	(11.3%)	86	(88.7%)	97	(1.1%)
Cook Islands Māori			15	(100%)	15	(0.2%)
Tongan	1	(2.0%)	49	(98.0%)	50	(0.6%)
Niuean	1	(10.0%)	9	(90.0%)	10	(0.1%)
Chinese	39	(4.4%)	857	(95.6%)	896	(10.3%)
Indian	30	(7.2%)	389	(92.8%)	419	(4.8%)
Other	150	(9.4%)	1446	(90.6%)	1596	(18.3%)
Multiple	32	(8.8%)	331	(91.2%)	363	(4.2%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

**Table 1.41. Ethnicity of participants by student status**

Ethnicity	Student status				Total	
	Domestic		International			
NZ European	4629	(99.6%)	18	(0.4%)	4647	(53.3%)
Māori	626	(100%)			626	(7.2%)
Samoan	93	(95.9%)	4	(4.1%)	97	(1.1%)
Cook Islands Māori	15	(100%)			15	(0.2%)
Tongan	44	(88.0%)	6	(12.0%)	50	(0.6%)
Niuean	10	(100%)			10	(0.1%)
Chinese	582	(65.0%)	314	(35.0%)	896	(10.3%)
Indian	292	(69.7%)	127	(30.3%)	419	(4.8%)
Other	1073	(67.2%)	523	(32.8%)	1596	(18.3%)
Multiple	351	(96.7%)	12	(3.3%)	363	(4.2%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

**Table 1.42. Ethnicity of participants by PhD student status**

Ethnicity	Student status		Total
	Domestic PhD	International PhD	
NZ European	125 (93.3%)	9 (6.7%)	134 (30.8%)
Māori	16 (100%)		16 (3.7%)
Samoan			
Cook Islands Māori			
Tongan	2 (66.7%)	1 (33.3%)	3 (0.7%)
Niuean			
Chinese	8 (29.6%)	19 (70.4%)	27 (6.2%)
Indian	9 (24.3%)	28 (75.7%)	37 (8.5%)
Other	58 (27.6%)	152 (72.4%)	210 (48.3%)
Multiple	5 (62.5%)	3 (37.5%)	8 (1.8%)
Total	223 (51.3%)	212 (48.7%)	435 (100%)

**Table 1.43. NZQA level by degree type**

Degree type	NZQA level										Total	
	Level 7		Level 8		Level 9		Level 10		Unclear			
Bachelor's degree	4081	(79.4%)									4081	(46.8%)
Conjoint bachelor's degree	156	(3.0%)									156	(1.8%)
Bachelor's degree + diploma	30	(0.6%)									30	(0.3%)
Certificate/Diploma	8	(0.2%)									8	(0.1%)
Graduate certificate/diploma	863	(16.8%)									863	(9.9%)
Honour's degree			671	(33.7%)							671	(7.7%)
Conjoint honour's degree			4	(0.2%)							4	(0.05%)
Postgraduate certificate/diploma			1315	(66.1%)							1315	(15.1%)
Master's degree					1148	(100%)					1148	(13.2%)
PhD							416	(95.6%)			416	(4.8%)
Doctorate - other							19	(4.4%)			19	(0.2%)
Unclear	2	(0.04%)							6	(100%)	8	(0.1%)
Total	5140	(59.0%)	1990	(22.8%)	1148	(13.2%)	435	(5.0%)	6	(0.1%)	8719	(100%)

Note:

- 'Total' percentages are expressed as proportions of the total sample ( $N = 8,719$ ). All other percentages are expressed as proportions of the column total.

**Table 1.44. NZQA level by study domain**

Study domain	NZQA level											
	Level 7		Level 8		Level 9		Level 10		Unclear		Total	
Agriculture/Horticulture	78	(46.4%)	39	(23.2%)	51	(30.4%)					168	(1.9%)
Commerce/Business	1106	(63.6%)	341	(19.6%)	291	(16.7%)	1	(0.1%)*	1	(0.1%)	1740	(20.0%)
Education	866	(80.9%)	153	(14.3%)	46	(4.3%)	5	(0.5%)*			1070	(12.3%)
Health Sciences	426	(49.7%)	352	(41.0%)	74	(8.6%)	6	(0.7%)*			858	(9.8%)
Humanities/Arts/Social Sciences	1446	(65.7%)	462	(21.0%)	288	(13.1%)	6	(0.3%)*			2202	(25.3%)
Law	91	(58.7%)	29	(18.7%)	35	(22.6%)					155	(1.8%)
Sciences/Engineering	920	(52.0%)	502	(28.4%)	340	(19.2%)	1	(0.1%)*	5	(0.3%)	1768	(20.3%)
PhD							416	(100%)			416	(4.8%)
Unclear	207	(60.5%)	112	(32.7%)	23	(6.7%)					342	(3.9%)
Total	5140	(59.0%)	1990	(22.8%)	1148	(13.2%)	435	(5.0%)	6	(0.1%)	8719	(100%)

\* Level 10 qualifications that are classified to a domain other than 'PhD' are other doctorates (i.e., not PhDs).

**Table 1.45. NZQA level by EFTS**

Total sample:

Degree Level	EFTS			Total
	Full-time	Part-time	Unclear	
Level 7	3670 (71.4%)	1469 (28.6%)	1 (0.02%)	5140 (59.0%)
Level 8	1022 (51.4%)	965 (48.5%)	3 (0.2%)	1990 (22.8%)
Level 9	568 (49.5%)	557 (48.5%)	23 (2.0%)	1148 (13.2%)
Level 10	234 (53.8%)	160 (36.8%)	41 (9.4%)	435 (5.0%)
Unclear	3 (50.0%)	3 (50.0%)		6 (0.1%)
Total	5497 (63.0%)	3154 (36.2%)	68 (0.8%)	8719 (100%)

Sample excluding non-criterion university:

Degree Level	EFTS			Total
	Full-time	Part-time	Unclear	
Level 7	3229 (73.2%)	1182 (26.8%)	1 (0.02%)	4412 (61.3%)
Level 8	720 (48.3%)	768 (51.5%)	3 (0.2%)	1491 (20.7%)
Level 9	463 (51.0%)	421 (46.4%)	23 (2.5%)	907 (12.6%)
Level 10	179 (47.2%)	159 (42.0%)	41 (10.8%)	379 (5.3%)
Unclear	3 (50.0%)	3 (50.0%)		6 (0.1%)
Total	4594 (63.8%)	2533 (35.2%)	68 (0.9%)	7195 (100%)

**Table 1.46. NZQA level by mode of study**

NZQA Level	Mode of study		Total
	Extramural	Intramural	
Level 7	487 (9.5%)	4653 (90.5%)	5140 (59.0%)
Level 8	383 (19.2%)	1607 (80.8%)	1990 (22.8%)
Level 9	97 (8.4%)	1051 (91.6%)	1148 (13.2%)
Level 10	10 (2.3%)	425 (97.7%)	435 (5.0%)
Unclear		6 (100%)	6 (0.1%)
Total	977 (11.2%)	7742 (88.8%)	8719 (100%)

**Table 1.47. NZQA level by student status**

NZQA Level	Student status		Total
	Domestic	International	
Level 7	4767 (92.7%)	373 (7.3%)	5140 (59.0%)
Level 8	1759 (88.4%)	231 (11.6%)	1990 (22.8%)
Level 9	960 (83.6%)	188 (16.4%)	1148 (13.2%)
Level 10	223 (51.3%)	212 (48.7%)	435 (5.0%)
Unclear	6 (100%)		6 (0.1%)
Total	7715 (88.5%)	1004 (11.5%)	8719 (100%)

**Table 1.48. Degree type by study domain**

Degree type	Study domain									Total
	Agriculture/ Horticulture	Commerce/ Business	Education	Health Sciences	Humanities/ Arts/ Social Sciences	Law	Sciences/ Engineering	PhD	Unclear	
Bachelor's	71 (1.7%)	914 (22.4%)	397 (9.7%)	422 (10.3%)	1360 (33.3%)	89 (2.2%)	827 (20.3%)		1 (0.02%)	4081 (46.8%)
Conjoint bachelor's		5 (3.2%)	1 (0.6%)		1 (0.6%)		1 (0.6%)		148 (94.9%)	156 (1.8%)
Bachelor's + dipl.			30 (100%)							30 (0.3%)
Cert./Dipl.		1 (12.5%)		4 (50.0%)	3 (37.5%)					8 (0.1%)
Grad. Cert./dipl.	7 (0.8%)	185 (21.4%)	438 (50.8%)		81 (9.4%)	2 (0.2%)	92 (10.7%)		58 (6.7%)	863 (9.9%)
Honour's	22 (3.3%)	95 (14.2%)	10 (1.5%)	25 (3.7%)	247 (36.8%)	24 (3.6%)	248 (37.0%)			671 (7.7%)
Conjoint honour's									4 (100%)	4 (0.05%)
Postgrad. cert./dipl.	17 (1.3%)	246 (18.7%)	143 (10.9%)	327 (24.9%)	215 (16.3%)	5 (0.4%)	254 (19.3%)		108 (8.2%)	1315 (15.1%)
Master's	51 (4.4%)	291 (25.3%)	46 (4.0%)	74 (6.4%)	288 (25.1%)	35 (3.0%)	340 (29.6%)		23 (2.0%)	1148 (13.2%)
PhD								416 (100%)		416 (4.8%)
Doctorate		1 (5.3%)	5 (26.3%)	6 (31.6%)	6 (31.6%)		1 (5.3%)			19 (0.2%)
Unclear		2 (25.0%)			1 (12.5%)		5 (62.5%)			8 (0.1%)
Total	168 (1.9%)	1740 (20.0%)	1070 (12.3%)	858 (9.8%)	2202 (25.3%)	155 (1.8%)	1768 (20.3%)	416 (4.8%)	342 (3.9%)	8719 (100%)

**Table 1.49. Degree type by EFTS**

Total sample:

Star sample:							
Degree type	EFTS						Total
	Full-time		Part-time		Unclear		
Bachelor's	2995	(73.4%)	1086	(26.6%)			4081 (46.8%)
Conjoint bachelor's	116	(74.4%)	40	(25.6%)			156 (1.8%)
Bachelor's + dipl.	30	(100%)					30 (0.3%)
Cert./Dipl.	4	(50.0%)	4	(50.0%)			8 (0.1%)
Grad. Cert./dipl.	524	(60.7%)	338	(39.2%)	1	(0.1%)	863 (9.9%)
Honour's	544	(81.1%)	127	(18.9%)			671 (7.7%)
Conjoint honour's	4	(100%)					4 (0.05%)
Postgrad. cert./dipl.	474	(36.0%)	838	(63.7%)	3	(0.2%)	1315 (15.1%)
Master's	568	(49.5%)	557	(48.5%)	23	(2.0%)	1148 (13.2%)
PhD	222	(53.4%)	153	(36.8%)	41	(9.9%)	416 (4.8%)
Doctorate	12	(63.2%)	7	(36.8%)			19 (0.2%)
Unclear	4	(50.0%)	4	(50.0%)			8 (0.1%)
Total	5497	(63.0%)	3154	(36.2%)	68	(0.8%)	8719 (100%)

Sample excluding non-criterion university:

	EFTS						
Degree type	Full-time		Part-time		Unclear		Total
Bachelor's	2714	(73.8%)	964	(26.2%)			3678 (51.1%)
Conjoint bachelor's	113	(73.9%)	40	(26.1%)			153 (2.1%)
Bachelor's + dipl.	7	(100%)					7 (0.1%)
Cert./Dipl.	4	(50.0%)	4	(50.0%)			8 (0.1%)
Grad. Cert./dipl.	390	(69.1%)	173	(30.7%)	1	(0.2%)	564 (7.8%)
Honour's	428	(80.5%)	104	(19.5%)			532 (7.4%)
Conjoint honour's	4	(100%)					4 (0.1%)
Postgrad. cert./dipl.	288	(30.2%)	664	(69.5%)	3	(0.3%)	955 (13.3%)
Master's	463	(51.0%)	421	(46.4%)	23	(2.5%)	907 (12.6%)
PhD	173	(47.1%)	153	(41.7%)	41	(11.2%)	367 (5.1%)
Doctorate	6	(50.0%)	6	(50.0%)			12 (0.2%)
Unclear	4	(50.0%)	4	(50.0%)			8 (0.1%)
Total	4594	(63.8%)	2533	(35.2%)	68	(0.9%)	7195 (100%)



**Table 1.50. Degree type by mode of study**

Degree type	Mode of Study				Total	
	Extramural		Intramural			
Bachelor's degree	224	(5.5%)	3857	(94.5%)	4081	(46.8%)
Conjoint bachelor's degree	1	(0.6%)	155	(99.4%)	156	(1.8%)
Bachelor's degree + diploma	8	(26.7%)	22	(73.3%)	30	(0.3%)
Certificate/Diploma			8	(100%)	8	(0.1%)
Graduate certificate/diploma	254	(29.4%)	609	(70.6%)	863	(9.9%)
Honour's degree	14	(2.1%)	657	(97.9%)	671	(7.7%)
Conjoint honour's degree			4	(100%)	4	(0.05%)
Postgraduate certificate/diploma	369	(28.1%)	946	(71.9%)	1315	(15.1%)
Master's degree	97	(8.4%)	1051	(91.6%)	1148	(13.2%)
PhD	9	(2.2%)	407	(97.8%)	416	(4.8%)
Doctorate - other	1	(5.3%)	18	(94.7%)	19	(0.2%)
Unclear			8	(100%)	8	(0.1%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

**Table 1.51. Degree type by student status**

Degree type	Student status					
	Domestic		International		Total	
Bachelor's degree	3774	(92.5%)	307	(7.5%)	4081	(46.8%)
Conjoint bachelor's degree	156	(100%)			156	(1.8%)
Bachelor's degree + diploma	30	(100%)			30	(0.3%)
Certificate/Diploma	8	(100%)			8	(0.1%)
Graduate certificate/diploma	797	(92.4%)	66	(7.6%)	863	(9.9%)
Honour's degree	625	(93.1%)	46	(6.9%)	671	(7.7%)
Conjoint honour's degree	4	(100%)			4	(0.05%)
Postgraduate certificate/diploma	1130	(85.9%)	185	(14.1%)	1315	(15.1%)
Master's degree	960	(83.6%)	188	(16.4%)	1148	(13.2%)
PhD	205	(49.3%)	211	(50.7%)	416	(4.8%)
Doctorate - other	18	(94.7%)	1	(5.3%)	19	(0.2%)
Unclear	8	(100%)			8	(0.1%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

**Table 1.52. Study domain by EFTS**

Total sample:

Study domain	EFTS			Total
	Full-time	Part-time	Unclear	
Agriculture/Horticulture	93 (55.4%)	60 (35.7%)	15 (8.9%)	168 (1.9%)
Commerce/Business	967 (55.6%)	772 (44.4%)	1 (0.1%)	1740 (20.0%)
Education	756 (70.7%)	314 (29.3%)		1070 (12.3%)
Health Sciences	491 (57.2%)	367 (42.8%)		858 (9.8%)
Humanities/Arts/Social Sciences	1492 (67.8%)	699 (31.7%)	11 (0.5%)	2202 (25.3%)
Law	89 (57.4%)	66 (42.6%)		155 (1.8%)
Sciences/Engineering	1199 (67.8%)	569 (32.2%)		1768 (20.3%)
PhD	222 (53.4%)	153 (36.8%)	41 (9.9%)	416 (4.8%)
Unclear	188 (55.0%)	154 (45.0%)		342 (3.9%)
Total	5497 (63.0%)	3154 (36.2%)	68 (0.8%)	8719 (100%)

Sample excluding non-criterion university:

Study domain	EFTS			Total
	Full-time	Part-time	Unclear	
Agriculture/Horticulture	53 (43.8%)	53 (43.8%)	15 (12.4%)	121 (1.7%)
Commerce/Business	733 (59.6%)	496 (40.3%)	1 (0.1%)	1230 (17.1%)
Education	603 (72.6%)	228 (27.4%)		831 (11.5%)
Health Sciences	491 (57.2%)	367 (42.8%)		858 (11.9%)
Humanities/Arts/Social Sciences	1242 (68.6%)	558 (30.8%)	11 (0.6%)	1811 (25.2%)
Law	89 (57.4%)	66 (42.6%)		155 (2.2%)
Sciences/Engineering	1025 (69.1%)	458 (30.9%)		1483 (20.6%)
PhD	173 (47.1%)	153 (41.7%)	41 (11.2%)	367 (5.1%)
Unclear	185 (54.6%)	154 (45.4%)		339 (4.7%)
Total	4594 (63.8%)	2533 (35.2%)	68 (0.9%)	7195 (100%)

**Table 1.53. Study domain by mode of study**

Study domain	Mode of study					
	Extramural		Intramural		Total	
Agriculture/Horticulture	1	(0.6%)	167	(99.4%)	168	(1.9%)
Commerce/Business	252	(14.5%)	1488	(85.5%)	1740	(20.0%)
Education	275	(25.7%)	795	(74.3%)	1070	(12.3%)
Health Sciences	134	(15.6%)	724	(84.4%)	858	(9.8%)
Humanities/Arts/Social Sciences	195	(8.9%)	2007	(91.1%)	2202	(25.3%)
Law	1	(0.6%)	154	(99.4%)	155	(1.8%)
Sciences/Engineering	95	(5.4%)	1673	(94.6%)	1768	(20.3%)
PhD	9	(2.2%)	407	(97.8%)	416	(4.8%)
Unclear	15	(4.4%)	327	(95.6%)	342	(3.9%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

**Table 1.54. Study domain by student status**

Study domain	Student status					
	Domestic		International		Total	
Agriculture/Horticulture	141	(83.9%)	27	(16.1%)	168	(1.9%)
Commerce/Business	1474	(84.7%)	266	(15.3%)	1740	(20.0%)
Education	1035	(96.7%)	35	(3.3%)	1070	(12.3%)
Health Sciences	821	(95.7%)	37	(4.3%)	858	(9.8%)
Humanities/Arts/Social Sciences	2035	(92.4%)	167	(7.6%)	2202	(25.3%)
Law	147	(94.8%)	8	(5.2%)	155	(1.8%)
Sciences/Engineering	1545	(87.4%)	223	(12.6%)	1768	(20.3%)
PhD	205	(49.3%)	211	(50.7%)	416	(4.8%)
Unclear	312	(91.2%)	30	(8.8%)	342	(3.9%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

**Table 1.55. EFTS by mode of study**

Total sample:

EFTS	Mode of study					
	Extramural		Intramural		Total	
Full-time	362	(6.6%)	5135	(93.4%)	5497	(63.0%)
Part-time	615	(19.5%)	2539	(80.5%)	3154	(36.2%)
Unclear			68	(100%)	68	(0.8%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

Sample excluding non-criterion university:

EFTS	Mode of study					
	Extramural		Intramural		Total	
Full-time	153	(3.3%)	4441	(96.7%)	4594	(63.8%)
Part-time	231	(9.1%)	2302	(90.9%)	2533	(35.2%)
Unclear			68	(100%)	68	(0.9%)
Total	384	(5.3%)	6811	(94.7%)	7195	(100%)

**Table 1.56. EFTS by student status**

Total sample:

EFTS	Student Status				Total	
	Domestic		International			
Full-time	4862	(88.4%)	635	(11.6%)	5497	(63.0%)
Part-time	2816	(89.3%)	338	(10.7%)	3154	(36.2%)
Unclear	37	(54.4%)	31	(45.6%)	68	(0.8%)
Total	7715	(88.5%)	1004	(11.5%)	8719	(100%)

Sample excluding non-criterion university:

EFTS	Student Status				Total	
	Domestic		International			
Full-time	4100	(89.2%)	494	(10.8%)	4594	(63.8%)
Part-time	2237	(88.3%)	296	(11.7%)	2533	(35.2%)
Unclear	37	(54.4%)	31	(45.6%)	68	(0.9%)
Total	6374	(88.6%)	821	(11.4%)	7195	(100%)

**Table 1.57. EFTS by PhD student status**

Total sample:

EFTS	Student Status				Total	
	Domestic PhD		International PhD			
Full-time	112	(47.9%)	122	(52.1%)	234	(53.8%)
Part-time	93	(58.1%)	67	(41.9%)	160	(36.8%)
Unclear	18	(43.9%)	23	(56.1%)	41	(9.4%)
Total	223	(51.3%)	212	(48.7%)	435	(100%)

Sample excluding non-criterion university:

EFTS	Student Status				Total	
	Domestic PhD		International PhD			
Full-time	73	(40.8%)	106	(59.2%)	179	(47.2%)
Part-time	92	(57.9%)	67	(42.1%)	159	(42.0%)
Unclear	18	(43.9%)	23	(56.1%)	41	(10.8%)
Total	183	(48.3%)	196	(51.7%)	379	(100%)

**Table 1.58. Mode of study by student status**

Student status	Mode of study				Total	
	Extramural		Intramural			
Domestic	959	(12.4%)	6756	(87.6%)	7715	(88.5%)
International	18	(1.8%)	986	(98.2%)	1004	(11.5%)
Total	977	(11.2%)	7742	(88.8%)	8719	(100%)

**Table 1.59. Mode of study by PhD student status**

<b>Student status</b>	<b>Mode of study</b>		<b>Total</b>
	<b>Extramural</b>	<b>Intramural</b>	
Domestic PhD	8 (3.6%)	215 (96.4%)	223 (51.3%)
International PhD	2 (0.9%)	210 (99.1%)	212 (48.7%)
Total	10 (2.3%)	425 (97.7%)	435 (100%)

### Country of origin of international students

The data presented in the series of tables that follow are primarily based on participants' responses to item GDUD15\_T0, "What is your residency status? [New Zealand citizen/permanent resident; Australian citizen/permanent resident; International citizenship; Multiple citizenship]." If participants indicated that they were a New Zealand citizen/permanent resident, their country of origin was listed as New Zealand. If participants indicated that they were an Australian citizen/permanent resident, their country of origin was listed as Australia. If participants indicated that they held international citizenship, their country of origin was listed as that specified. If participants indicated that they held multiple citizenship (e.g., dual citizenship), their countries of origin were listed as those specified. The data in the series of tables that follow refer only to international students ( $n = 1004$ ), as identified by the universities. In total,  $n = 850$  respondents (84.7%) listed their country of citizenship and this was taken to be their country of origin. If participants did not list their country of citizenship, country of origin was inferred from information provided in response to the following items:

- FPCA2ca\_T0: "In the next two years do you plan to... Select all that apply. [Work in New Zealand; Work overseas; Work in your country of origin; None of the above]." If respondents indicated that they aimed to return to their country of origin to work, they specified their country of origin.
- GDUD9\_T0: "What was the most recent secondary school you attended before coming to university?"
- GDUD3\_T0: "Which ethnic group(s) do you belong to? Please select the option(s) that apply to you. [New Zealand European; Māori; Samoan, Cook Islands Māori; Tongan; Niuean; Chinese; Indian; Other]." If respondents selected 'other,' they specified their ethnicity.
- GDUD16a\_T0: "Please state your first language." If English was not respondents' first language, they indicated what their first language was.

**Table 1.60. Source of information in identifying participants' country of origin**

Item(s)	<i>n</i>	Percent
GDUD15_T0 (country of citizenship)	850	84.7%
FPCA2ca_T0 (work in country of origin)	50	5.0%
GDUD9_T0 (secondary school)	8	0.8%
GDUD3_T0 (ethnicity)	7	0.7%
GDUD16a_T0 (language)	1	0.1%
GDUD15_T0 (country of citizenship) + FPCA2ca_T0 (work in country of origin)	1	0.1%
GDUD9_T0 (secondary school) + GDUD3_T0 (ethnicity)	10	1.0%
GDUD9_T0 (secondary school) + GDUD16a_T0 (language)	5	0.5%
GDUD3_T0 (ethnicity) + GDUD16a_T0 (language)	16	1.6%
GDUD9_T0 (secondary school) + GDUD3_T0 (ethnicity) + GDUD16a_T0 (language)	23	2.3%
No items answered or unclear from answers provided	33	3.3%
Total	1004	100%

Each respondent's country of origin was further assigned to a geographical subregion and continent based on the United Nations geoscheme (pictured below).



**Table 1.61. Continent of origin of international students**

Continent	<i>n</i>	Percent
Africa	17	1.7%
Americas	79	7.9%
Asia	690	68.7%
Europe	92	9.2%
Oceania	85	8.5%
Americas/Asia	2	0.2%
Americas/Europe	2	0.2%
Americas/Oceania	2	0.2%
Asia/Europe	2	0.2%
Unclear	33	3.3%
Total	1004	100%

**Table 1.62. Geographical subregion of origin of international students**

<b>Continent</b>	<b>UN geographical subregion</b>	<b>n</b>	<b>Percent</b>
Africa	Eastern Africa	7	0.7%
	Middle Africa	1	0.1%
	Northern Africa	1	0.1%
	Southern Africa	5	0.5%
	Western Africa	3	0.3%
	<b>Total</b>	<b>17</b>	<b>1.7%</b>
Americas	Central America	8	0.8%
	Northern America	60	6.0%
	South America	11	1.1%
	<b>Total</b>	<b>79</b>	<b>7.9%</b>
Asia	Central Asia	2	0.2%
	Eastern Asia	301	30.0%
	South-Eastern Asia	192	19.1%
	Southern Asia	156	15.5%
	Western Asia	39	3.9%
	<b>Total</b>	<b>690</b>	<b>68.7%</b>
Europe	Eastern Europe	9	0.9%
	Northern Europe	31	3.1%
	Northern Europe/Western Europe	1	0.1%
	Southern Europe	3	0.3%
	Unclear	1	0.1%
	Western Europe	47	4.7%
	<b>Total</b>	<b>92</b>	<b>9.2%</b>
Oceania	Australia & New Zealand	41	4.1%
	Melanesia	29	2.9%
	Micronesia	1	0.1%
	Polynesia	14	1.4%
	<b>Total</b>	<b>85</b>	<b>8.5%</b>
Americas/Asia	Northern America/Eastern Asia	1	0.1%
	Northern America/Southern Asia	1	0.1%
	<b>Total</b>	<b>2</b>	<b>0.2%</b>
Americas/Europe	South America/Southern Europe	2	0.2%
	<b>Total</b>	<b>2</b>	<b>0.2%</b>
Americas/Oceania	Caribbean/Polynesia	1	0.1%
	Northern America/Australia & New Zealand	1	0.1%
	<b>Total</b>	<b>2</b>	<b>0.2%</b>
Asia/Europe	Southern Asia/Northern Europe	1	0.1%
	Southern Asia/Southern Europe	1	0.1%
	<b>Total</b>	<b>2</b>	<b>0.2%</b>
Unclear	Unclear	33	3.3%
	<b>Total</b>	<b>33</b>	<b>3.3%</b>
<b>TOTAL</b>		<b>1004</b>	<b>100%</b>



**Table 1.63. Country of origin of international students**

<b>Continent - Geographical subregion - Country</b>	<b><i>n</i></b>	<b>Percent</b>
<b>Africa</b>		
Eastern Africa		
Kenya	4	0.4%
Malawi	2	0.2%
Zimbabwe	1	0.1%
<b>Total</b>	<b>7</b>	<b>0.7%</b>
Middle Africa		
Cameroon	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Northern Africa		
Egypt	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Southern Africa		
South Africa	5	0.5%
<b>Total</b>	<b>5</b>	<b>0.5%</b>
Western Africa		
Nigeria	3	0.3%
<b>Total</b>	<b>3</b>	<b>0.3%</b>
<b>Total</b>	<b>17</b>	<b>1.7%</b>
<b>Americas</b>		
Central America		
Guatemala	2	0.2%
Honduras	1	0.1%
Mexico	4	0.4%
Nicaragua	1	0.1%
<b>Total</b>	<b>8</b>	<b>0.8%</b>
Northern America		
Canada	22	2.2%
USA	38	3.8%
<b>Total</b>	<b>60</b>	<b>6.0%</b>
South America		
Argentina	2	0.2%
Brazil	3	0.3%
Chile	5	0.5%
Colombia	1	0.1%
<b>Total</b>	<b>11</b>	<b>1.1%</b>
<b>Total</b>	<b>79</b>	<b>7.9%</b>
<b>Asia</b>		
Central Asia		
Kazakhstan	2	0.2%
<b>Total</b>	<b>2</b>	<b>0.2%</b>

<hr/>			
Eastern Asia			
China	238	23.7%	
Hong Kong	9	0.9%	
Japan	18	1.8%	
Korea & South Korea	25	2.5%	
Taiwan	11	1.1%	
<b>Total</b>	<b>301</b>	<b>30.0%</b>	
<hr/>			
South-Eastern Asia			
Brunei	2	0.2%	
Cambodia	8	0.8%	
East Timor	5	0.5%	
Indonesia	23	2.3%	
Laos	3	0.3%	
Malaysia	80	8.0%	
Philippines	8	0.8%	
Singapore	8	0.8%	
Thailand	22	2.2%	
Vietnam	33	3.3%	
<b>Total</b>	<b>192</b>	<b>19.1%</b>	
<hr/>			
Southern Asia			
Bangladesh	12	1.2%	
India	104	10.4%	
Iran	5	0.5%	
Maldives	3	0.3%	
Nepal	8	0.8%	
Pakistan	15	1.5%	
Sri Lanka	9	0.9%	
<b>Total</b>	<b>156</b>	<b>15.5%</b>	
<hr/>			
Western Asia			
Bahrain	5	0.5%	
Cyprus	1	0.1%	
Oman	4	0.4%	
Saudi Arabia	28	2.8%	
United Arab Emirates	1	0.1%	
<b>Total</b>	<b>39</b>	<b>3.9%</b>	
<b>Total</b>	<b>690</b>	<b>68.7%</b>	
<hr/>			
Europe			
<hr/>			
Eastern Europe			
Hungary	1	0.1%	
Russia	8	0.8%	
<b>Total</b>	<b>9</b>	<b>0.9%</b>	
<hr/>			

Northern Europe		
Denmark	2	0.2%
Estonia	1	0.1%
Finland	1	0.1%
Ireland	3	0.3%
Norway	3	0.3%
Scotland	1	0.1%
Sweden	2	0.2%
UK	18	1.8%
<b>Total</b>	<b>31</b>	<b>3.1%</b>
Northern Europe/Western Europe		
Ireland/Netherlands	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Southern Europe		
Italy	1	0.1%
Slovenia	1	0.1%
Spain	1	0.1%
<b>Total</b>	<b>3</b>	<b>0.3%</b>
Western Europe		
Belgium	2	0.2%
France	13	1.3%
Germany	28	2.8%
Netherlands	1	0.1%
Switzerland	3	0.3%
<b>Total</b>	<b>47</b>	<b>4.7%</b>
Unclear		
Unclear	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
<b>Total</b>	<b>92</b>	<b>9.2%</b>
Oceania		
Australia & New Zealand		
Australia	3	0.3%
New Zealand	38	3.8%
<b>Total</b>	<b>41</b>	<b>4.1%</b>
Melanesia		
Fiji	11	1.1%
New Caledonia	2	0.2%
Papua New Guinea	8	0.8%
Solomon Islands	7	0.7%
Vanuatu	1	0.1%
<b>Total</b>	<b>29</b>	<b>2.9%</b>
Micronesia		
Kiribati	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>

Polynesia		
Samoa	5	0.5%
Tahiti	1	0.1%
Tonga	6	0.6%
Tuvalu	2	0.2%
<b>Total</b>	<b>14</b>	<b>1.4%</b>
<b>Total</b>	<b>85</b>	<b>8.5%</b>
Americas/Asia		
Northern America/Eastern Asia		
Japan/USA	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Northern America/Southern Asia		
Canada/Pakistan	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
<b>Total</b>	<b>2</b>	<b>0.2%</b>
Americas/Europe		
South America/Southern Europe		
Brazil/Italy	1	0.1%
Chile/Italy	1	0.1%
<b>Total</b>	<b>2</b>	<b>0.2%</b>
<b>Total</b>	<b>2</b>	<b>0.2%</b>
Americas/Oceania		
Caribbean/Polynesia		
Trinidad & Tobago/Samoa	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Northern America/Australia & New Zealand		
New Zealand/USA	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
<b>Total</b>	<b>2</b>	<b>0.2%</b>
Asia/Europe		
Southern Asia/Northern Europe		
India/UK	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
Southern Asia/Southern Europe		
India/Portugal	1	0.1%
<b>Total</b>	<b>1</b>	<b>0.1%</b>
<b>Total</b>	<b>2</b>	<b>0.2%</b>
Unclear		
Unclear		
Unclear	33	3.3%
<b>Total</b>	<b>33</b>	<b>3.3%</b>
<b>Total</b>	<b>33</b>	<b>3.3%</b>
<b>TOTAL</b>	<b>1004</b>	<b>100%</b>

## Country of origin of international PhD students

**Table 1.64. Continent of origin of international PhD students**

<b>Continent</b>	<b><i>n</i></b>	<b>Percent</b>
Africa	11	5.2%
Americas	36	17.0%
Asia	88	41.5%
Europe	40	18.9%
Oceania	27	12.7%
Americas/Asia	1	0.5%
Americas/Europe	1	0.5%
Asia/Europe	1	0.5%
Unclear	7	3.3%
<b>Total</b>	<b>212</b>	<b>100%</b>

**Table 1.65. Geographical subregion of origin of international PhD students**

<b>Continent</b>	<b>UN geographical subregions</b>	<b>n</b>	<b>Percent</b>
Africa	Eastern Africa	5	2.4%
	Middle Africa	1	0.5%
	Northern Africa	1	0.5%
	Southern Africa	2	0.9%
	Western Africa	2	0.9%
	<b>Total</b>	<b>11</b>	<b>5.2%</b>
Americas	Central America	3	1.4%
	Northern America	27	12.7%
	South America	6	2.8%
	<b>Total</b>	<b>36</b>	<b>17.0%</b>
Asia	Central Asia		
	Eastern Asia	13	6.1%
	South-Eastern Asia	31	14.6%
	Southern Asia	42	19.8%
	Western Asia	2	0.9%
	<b>Total</b>	<b>88</b>	<b>41.5%</b>
Europe	Eastern Europe	1	0.5%
	Northern Europe	15	7.1%
	Northern Europe/Western Europe	1	0.5%
	Southern Europe		
	Western Europe	23	10.8%
	<b>Total</b>	<b>40</b>	<b>18.9%</b>
Oceania	Australia & New Zealand	21	9.9%
	Melanesia	4	1.9%
	Micronesia		
	Polynesia	2	0.9%
	<b>Total</b>	<b>27</b>	<b>12.7%</b>
Americas/Asia	Northern America/Southern Asia	1	0.5%
	<b>Total</b>	<b>1</b>	<b>0.5%</b>
Americas/Europe	South America/Southern Europe	1	0.5%
	<b>Total</b>	<b>1</b>	<b>0.5%</b>
Asia/Europe	Southern Asia/Southern Europe	1	0.5%
	<b>Total</b>	<b>1</b>	<b>0.5%</b>
Unclear	Unclear	7	3.3%
	<b>Total</b>	<b>7</b>	<b>3.3%</b>
<b>TOTAL</b>		<b>212</b>	<b>100%</b>

**Table 1.66. Country of origin of international PhD students**

<b>Continent - Geographical subregion - Country</b>	<b><i>n</i></b>	<b>Percent</b>
<b>Africa</b>		
Eastern Africa		
Kenya	3	1.4%
Malawi	2	0.9%
<b>Total</b>	<b>5</b>	<b>2.4%</b>
Middle Africa		
Cameroon	1	0.5%
<b>Total</b>	<b>1</b>	<b>0.5%</b>
Northern Africa		
Egypt	1	0.5%
<b>Total</b>	<b>1</b>	<b>0.5%</b>
Southern Africa		
South Africa	2	0.9%
<b>Total</b>	<b>2</b>	<b>0.9%</b>
Western Africa		
Nigeria	2	0.9%
<b>Total</b>	<b>2</b>	<b>0.9%</b>
<b>Total</b>	<b>11</b>	<b>5.2%</b>
<b>Americas</b>		
Central America		
Guatemala	1	0.5%
Mexico	2	0.9%
<b>Total</b>	<b>3</b>	<b>1.4%</b>
Northern America		
Canada	9	4.2%
USA	18	8.5%
<b>Total</b>	<b>27</b>	<b>12.7%</b>
South America		
Argentina	1	0.5%
Brazil	2	0.9%
Chile	2	0.9%
Colombia	1	0.5%
<b>Total</b>	<b>6</b>	<b>2.8%</b>
<b>Total</b>	<b>36</b>	<b>17.0%</b>
<b>Asia</b>		
Eastern Asia		
China	9	4.2%
Japan	3	1.4%
Taiwan	1	0.5%
<b>Total</b>	<b>13</b>	<b>6.1%</b>

South-Eastern Asia			
Indonesia	6	2.8%	
Malaysia	13	6.1%	
Philippines	1	0.5%	
Singapore	1	0.5%	
Thailand	5	2.4%	
Vietnam	5	2.4%	
<b>Total</b>	<b>31</b>	<b>14.6%</b>	
Southern Asia			
Bangladesh	4	1.9%	
India	20	9.4%	
Iran	3	1.4%	
Maldives	1	0.5%	
Pakistan	13	6.1%	
Sri Lanka	1	0.5%	
<b>Total</b>	<b>42</b>	<b>19.8%</b>	
Western Asia			
Oman	1	0.5%	
United Arab Emirates	1	0.5%	
<b>Total</b>	<b>2</b>	<b>0.9%</b>	
<b>Total</b>	<b>88</b>	<b>41.5%</b>	
Europe			
Eastern Europe			
Hungary	1	0.5%	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
Northern Europe			
Denmark	1	0.5%	
Estonia	1	0.5%	
Ireland	2	0.9%	
Sweden	1	0.5%	
UK	10	4.7%	
<b>Total</b>	<b>15</b>	<b>7.1%</b>	
Northern Europe/Western Europe			
Ireland/Netherlands	1	0.5%	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
Western Europe			
France	5	2.4%	
Germany	16	7.5%	
Netherlands	1	0.5%	
Switzerland	1	0.5%	
<b>Total</b>	<b>23</b>	<b>10.8%</b>	
<b>Total</b>	<b>40</b>	<b>18.9%</b>	



Oceania			
Australia & New Zealand			
Australia	1	0.5%	
New Zealand	20	9.4%	
<b>Total</b>	<b>21</b>	<b>9.9%</b>	
Melanesia			
Fiji	1	0.5%	
Papua New Guinea	1	0.5%	
Solomon Islands	2	0.9%	
<b>Total</b>	<b>4</b>	<b>1.9%</b>	
Polynesia			
Samoa	1	0.5%	
Tonga	1	0.5%	
<b>Total</b>	<b>2</b>	<b>0.9%</b>	
<b>Total</b>	<b>27</b>	<b>12.7%</b>	
Americas/Asia			
Northern America/Southern Asia			
Canada/Pakistan	1	0.5%	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
Americas/Europe			
South America/Southern Europe			
Brazil/Italy	1	0.5%	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
Asia/Europe			
Southern Asia/Southern Europe			
India/Portugal	1	0.5%	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
<b>Total</b>	<b>1</b>	<b>0.5%</b>	
Unclear			
Unclear			
Unclear	7	3.3%	
<b>Total</b>	<b>7</b>	<b>3.3%</b>	
<b>Total</b>	<b>7</b>	<b>3.3%</b>	
<b>TOTAL</b>	<b>212</b>	<b>100%</b>	

## DESCRIPTIVE ANALYSES OF GLSNZ VARIABLES

In the sections that follow, we present the baseline data for each of the survey items, except where the items require further preparation.

### General Demographics and University Details

**Are you of Māori descent (i.e., did you have a Māori birth parent, grandparent or great-grandparent, etc.)?**

8.8%	Yes
89.4%	No
1.4%	Don't know
0.4%	Skipped question

**Do you know the name(s) of your iwi (tribe or tribes)?**

$n = 764$  (8.8%) participants who indicated they are of Māori descent and provided a response

87.7%	Yes
12.3%	No

**If you know the name(s) of your iwi, please select all that apply:**

$n = 670$  (87.7%) participants who indicated they are of Māori descent and know the name(s) of their iwi

0.9%	Skipped question
------	------------------

#### **Te Tai Tokerau/ Tāmaki-makaurau (Northland/ Auckland) Region**

2.2%	Te Aupōuri
2.1%	Ngāti Kahu
-	Te Kawerau
2.1%	Ngāti Kurī
21.5%	Ngāpuhi
0.6%	Ngāpuhi ki Whaingaroa-Ngāti Kahu ki Whaingaroa
4.3%	Te Rarawa
0.3%	Te Roroa
0.4%	Ngāi Takoto
0.6%	Te Uri-o-Hau
1.3%	Ngāti Wai
4.3%	Ngāti Whātua

**Hauraki (Coromandel) Region**

0.4%	Ngāti Hako
-	Ngāti Hei
1.8%	Ngāti Maru (Hauraki)
0.9%	Ngāti Paoa
-	Patukirikiri
0.6%	Ngāti Porou ki Harataunga ki Mataora
-	Ngāti Pūkenga ki Waiau
-	Ngāti Rāhiri Tumutumu
0.4%	Ngāi Tai (Hauraki)
0.4%	Ngāti Tamaterā
-	Ngāti Tara Tokanui
0.3%	Ngāti Whanaunga

**Waikato/ Te Rohe Pōtae (Waikato/ King Country) Region**

1.5%	Ngāti Haua (Waikato)
6.7%	Ngāti Maniapoto
2.8%	Ngāti Raukawa (Waikato)
5.7%	Waikato

**Te Arawa/ Taupō (Rotorua/ Taupō) Region**

1.9%	Ngāti Pikiao (Te Arawa)
0.3%	Ngāti Rangiteaorere (Te Arawa)
0.7%	Ngāti Rangitihi (Te Arawa)
1.0%	Ngāti Rangiwewehi (Te Arawa)
0.1%	Ngāti Tahu-Ngāti Whaoa (Te Arawa)
0.6%	Tapuika (Te Arawa)
0.3%	Tarāwhai (Te Arawa)
1.6%	Tūhourangi (Te Arawa)
5.8%	Ngāti Tūwharetoa
0.7%	Uenuku-Kōpako (Te Arawa)
0.3%	Waitaha (Te Arawa)
4.6%	Ngāti Whakaue (Te Arawa)

**Tauranga Moana/ Mātaatua (Bay of Plenty) Region**

3.6%	Ngāti Awa
0.7%	Ngāti Manawa
0.4%	Ngāti Pūkenga
2.8%	Ngaiterangi
1.8%	Ngāti Ranginui
1.0%	Ngāi Tai (Tauranga Moana/ Mātaatua)
4.2%	Tūhoe
1.9%	Whakatōhea
1.9%	Te Whānau-a-Apanui
0.3%	Ngāti Whare

**Taranaki Region**

6.1%	Te Atiawa (Taranaki)
0.1%	Ngāti Maru (Taranaki)
1.6%	Ngāti Mutunga (Taranaki)
0.6%	Ngā Rauru
0.6%	Ngā Ruahine
-	Pakakohi
1.6%	Ngāti Ruanui
0.9%	Ngāti Tama (Taranaki)
0.1%	Tangāhoe
2.7%	Taranaki

**Te Tai Rāwhiti (East Coast) Region**

1.6%	Te Aitanga-a-Māhaki
11.5%	Ngāti Porou
2.4%	Rongowhakaata
0.1%	Ngāi Tāmanuhiri

**Te Matau-a-Māui/ Wairarapa (Hawke's Bay/ Wairarapa) Region**

2.7%	Ngāti Kahungunu ki Heretaunga
-	Ngāti Kahungunu ki Tamakinui-a-Rua
0.6%	Ngāti Kahungunu ki Tamatea
3.9%	Ngāti Kahungunu ki Te Wairoa
2.4%	Ngāti Kahungunu ki Wairarapa
0.6%	Ngāti Kahungunu ki Te Whanganui-a-Orotu
0.3%	Rangitāne (Te Matau-a-Māui/ Hawke's Bay/ Wairarapa)
1.2%	Rongomaiwahine (Te Māhia)
0.4%	Ngāti Pāhauwera
0.3%	Ngāti Rākaipaaka

**Whanganui/ Rangitīkei (Wanganui/ Rangitīkei) Region**

0.7%	Ngāti Apa (Rangitīkei)
0.7%	Te Ati Haunui-a-Pāpārangi
0.3%	Ngāti Haua (Taumarunui)
0.6%	Ngāti Hauiti

**Manawatū/ Horowhenua/ Te Whanganui-a-Tara (Manawatū/ Horowhenua/ Wellington) Region**

0.9%	Te Atiawa (Te Whanganui-a-Tara/ Wellington)
0.1%	Te Atiawa ki Whakarongotai
0.6%	Muaūpoko
0.1%	Rangitāne (Manawatū)
0.9%	Ngāti Kauwhata
3.9%	Ngāti Raukawa (Horowhenua/ Manawatū)
1.0%	Ngāti Toarangatira (Te Whanganui-a-Tara/ Wellington)
0.1%	Ngāti Tama ki Te Upoko o Te Ika (Te Whanganui-a-Tara/ Wellington)

**Te Waipounamu/ Wharekauri (South Island/ Chatham Islands) Region**

-	Ngāti Apa ki Te Rā Tō
1.0%	Te Atiawa (Te Waipounamu/ South Island)
0.6%	Ngāti Koata
0.1%	Ngāti Kuia
1.9%	Kāti Māmoe
0.3%	Moriori
0.1%	Ngāti Mutunga (Wharekauri/ Chatham Islands)
0.4%	Rangitāne (Te Waipounamu/ South Island)
0.4%	Ngāti Rārua
15.7%	Ngāi Tahu / Kāi Tahu
0.1%	Ngāti Tama (Te Waipounamu/ South Island)
-	Ngāti Toarangatira (Te Waipounamu/ South Island)
1.2%	Waitaha (Te Waipounamu/ South Island)

**Other**

3.1% Other:

**Te Tai Tokerau/ Tāmaki-makaurau (Northland/ Auckland) Region**

0.1% Ngāti Te Ata

**Waikato/ Te Rohe Pōtae (Waikato/ King Country) Region**

0.4% Tainui

0.1% Ngāti Tahinga

**Te Arawa/ Taupō (Rotorua/ Taupō) Region**

0.1% Ngāti Rongomai

**Tauranga Moana/ Mātaatua (Bay of Plenty) Region**

0.1% Ngāti Makino

0.1% Pirirakau

**Taranaki Region**

0.4% Nga Mahanga

**Te Tai Rāwhiti (East Coast) Region**

0.1% Te Aitanga-a-Hauiti

**Whanganui/ Rangitīkei (Wanganui/ Rangitīkei) Region**

0.1% Taihape area

**Region unclear**

0.3% Ngāti Hikairo

0.1% Ngāti Maru

0.1% Ngāti Tama (Mokau)

0.1% Ngāti Tukorehe

0.1% Ngāti Wairere

0.1% Te Atiawa

0.1% Te Wai-o-Hua

**Note:**

- Participants were able to endorse as many iwi as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the sample who indicated they were of Māori descent and knew the name(s) of their iwi ( $n = 670$ ).

**What is your relationship status?**

40.6%	Single
20.4%	In a relationship but not living together
20.2%	Married/Civil Union
15.8%	De facto (living together as a couple but not married to, or in a Civil Union with, one another)
2.2%	Divorced/Separated
0.3%	Widowed/Surviving Civil Union
0.5%	Skipped question

Note:

- Ordered from most to least frequently endorsed

**Are you a parent?**

21.0%	Yes
79.0%	No
0.02%	Skipped question

**How many children do you have?**

$n = 1,830$  (21.0%) participants who have children

Median number of children = 2

**Which of the following describes your current living arrangements? Select the option that best applies to you.**

37.4%	Living with friends or in a shared house
31.5%	Living with partner/spouse and/or children
22.4%	Living with parents or guardians
6.5%	Living by myself
1.7%	Living in a university hall or college of residence
0.4%	Other:
0.09%	No fixed abode
0.07%	Employer accommodation
0.03%	Military barracks
0.03%	Renting
0.02%	High School boarding house/hostel
0.02%	Own house
0.03%	Unclear
0.05%	Skipped question
0.1%	Skipped question

Note:

- Ordered from most to least frequently endorsed

**What is the highest level of education completed by your father/male caregiver?**

3.4%	Did not attend secondary school
28.9%	Some or all of secondary school
15.8%	Vocational certificate or diploma (e.g., certificate in construction)
26.0%	Undergraduate university degree, certificate or diploma
18.4%	Postgraduate university degree, certificate or diploma
5.6%	Not sure
1.3%	N/A
0.5%	Skipped question

**What is the highest level of education completed by your mother/female caregiver?**

4.1%	Did not attend secondary school
32.3%	Some or all of secondary school
15.5%	Vocational certificate or diploma (e.g., certificate in construction)
28.6%	Undergraduate university degree, certificate or diploma
13.9%	Postgraduate university degree, certificate or diploma
4.2%	Not sure
0.8%	N/A
0.6%	Skipped question

**Are you the first member of your immediate family to attend university?**

36.9%	Yes
62.9%	No
0.2%	Skipped question

**Is English your first language?**

74.3%	Yes
25.7%	No
0.1%	Skipped question

**How fluent in English are you?**

$n = 2241$  (25.7%) non-native English speakers

Mean = 4.27 ( $SD = 0.80$ )

0.4%	1	Not at all fluent
1.6%	2	
15.4%	3	
35.7%	4	
46.9%	5	Very fluent

**Were you required to take a test of English as a foreign language for entrance into your university programme?**

$n = 2240$  (25.7%) non-native English speakers

42.3% Yes  
57.7% No

**Do you regard this test as sufficient for success in a NZ university-level course?**

$n = 941$  (42.0%) non-native English speakers who were required to take a test of English as a foreign language

79.7% Yes  
20.3% No

**How fluent in Te Reo Māori are you?**

80.5%	1	Not at all fluent
14.6%	2	
3.4%	3	
0.8%	4	
0.3%	5	Very fluent
0.4%		Skipped question

$n = 8682$  (99.6%) who provided a rating  
Mean = 1.25 ( $SD = 0.58$ )

**How fluent in sign language are you?**

89.8%	1	Not at all fluent
6.4%	2	
2.1%	3	
0.8%	4	
0.6%	5	Very fluent
0.4%		Skipped question

$n = 8684$  (99.6%) who provided a rating  
Mean = 1.15 ( $SD = 0.53$ )



**Why did you choose the university you are currently attending? Select all those that apply.**

70.1%	The university offered the course/programme relevant to the career I sought to pursue
47.2%	The academic reputation of the university
44.7%	Location
28.1%	It was the nearest university
26.9%	Costs (e.g., living, travel, fees)
23.4%	Friends were attending the same university
21.3%	Talking to other students or graduates
19.2%	To meet new people
17.2%	To increase independence
16.4%	To enjoy new places
14.3%	Campus lifestyle
13.5%	Family connection
11.8%	University marketing (e.g., open days, advertisement)
11.5%	Advice from teacher/career adviser
10.5%	Scholarship(s) availability
8.1%	The opportunity to work with a particular academic
7.1%	Good halls of residence
3.2%	Good support systems (e.g. Māori, Pacific Island and International support)
2.9%	Culturally appropriate programmes of study
6.4%	Other:
2.5%	Extramural study available
1.4%	Miscellaneous
0.7%	Employer requirement
0.3%	Continuity from previous study
0.3%	Is/was a staff member at university
0.2%	Flexibility of study/courses
0.2%	Advice from others
0.2%	Had no choice
0.1%	Advice from parents
0.1%	University exchange partner
0.03%	Bridging courses offered
0.02%	Earthquake displacement
0.01%	Continuity from previous study + extramural study available
0.2%	Unclear
0.1%	Skipped question
0.2%	Skipped question

**Note:**

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.

Please rank your **top 3** reasons for choosing the university you are currently attending, **numbering from 1 as the most important**. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

63.3%	The university offered the course/programme relevant to the career I sought to pursue
37.6%	The academic reputation of the university
29.3%	Location
20.4%	It was the nearest university
16.3%	Costs (e.g., living, travel, fees)
14.0%	Friends were attending the same university
9.2%	Talking to other students or graduates
7.9%	Scholarship(s) availability
7.7%	To increase independence
7.7%	Family connection
6.8%	Campus lifestyle
6.6%	To meet new people
6.1%	To enjoy new places
5.8%	The opportunity to work with a particular academic
5.7%	Advice from teacher/career adviser
3.8%	University marketing (e.g., open days, advertisement)
1.5%	Good support systems (e.g. Māori, Pacific Island and International support)
1.2%	Culturally appropriate programmes of study
1.0%	Good halls of residence
5.9%	Other
1.0%	Skipped question

Note:

- Percentage refers to the cumulative proportion of the total sample ( $N = 8,719$ ) who gave each item a rank of 1, 2, or 3, hence percentages do not sum to 100%.
- Ordered from most to least frequently ranked.

**Why did you choose your topic/field of study? Select all those that apply.**

77.1%	A strong interest in the topic/field
71.4%	Wanted to pursue a career in this topic/field
34.5%	To increase my earning potential
16.9%	Did not know what else to do (e.g., no career plans at the time)
13.8%	Recommendation of careers adviser and/or someone working in the field
10.7%	Family expectations
7.1%	Recommendation of teacher(s)
6.1%	Friend(s)/peer(s) were pursuing this topic/field
3.1%	No suitable alternative employment
0.7%	Lower course fees
4.8%	Other:
1.5%	To upskill
0.8%	Miscellaneous
0.4%	Employer requirement
0.2%	Aptitude for subject
0.2%	Love of learning
0.2%	To make a difference
0.1%	Awarded a scholarship
0.1%	Advice from others
0.1%	Flexibility of course
0.1%	Second-best option
0.1%	Continuity from previous study
0.1%	Opportunities for travel
0.1%	To get a job
0.1%	Breadth of course
0.1%	Extramural study available
0.1%	Finish what started
0.03%	Advice from parents
0.03%	Length of course
0.3%	Unclear
0.1%	Skipped question
0.1%	Skipped question

**Note:**

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.

Please rank your top 3 reasons for choosing your topic/field of study, numbering from 1 as the most important. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

75.4%	A strong interest in the topic/field
69.9%	Wanted to pursue a career in this topic/field
32.0%	To increase my earning potential
15.5%	Did not know what else to do (e.g., no career plans at the time)
10.5%	Recommendation of careers adviser and/or someone working in the field
8.4%	Family expectations
4.9%	Recommendation of teacher(s)
4.3%	Friend(s)/peer(s) were pursuing this topic/field
2.4%	No suitable alternative employment
0.5%	Lower course fees
4.5%	Other
0.5%	Skipped question

Note:

- Percentage refers to the cumulative proportion of the total sample ( $N = 8,719$ ) who gave each item a rank of 1, 2, or 3, hence percentages do not sum to 100%.
- Ordered from most to least frequently ranked.

## Satisfaction with University

Have you sought careers advice at your university?

26.6% Yes  
73.4% No  
0.03% Skipped question

Overall, how would you evaluate the quality of careers advice that you have received at your university?

$n = 2314$  (26.5%) who had sought careers advice and provided a rating  
Mean = 2.83 ( $SD = 0.87$ )

8.0%	1	Poor
23.3%	2	Fair
46.4%	3	Good
22.3%	4	Excellent

Overall, how would you evaluate the availability of careers advice that you have received at your university?

$n = 2314$  (26.5%) who had sought careers advice and provided a rating  
Mean = 2.88 ( $SD = 0.85$ )

6.4%	1	Poor
23.9%	2	Fair
45.1%	3	Good
24.6%	4	Excellent

**In your experience at your university during the current academic year, about how often have you done each of the following:**

Response options: 1 – Never; 2 – Sometimes; 3 – Often; 4 - Very often; N/A – Not applicable

Question	N <sup>*</sup>	Mean (SD) <sup>**</sup>	Percent of endorsements				
			1	2	3	4	N/A
Used library resources online.	8717	3.4 (0.8)	2.8	13.4	24.1	59.3	0.4
Used email or an online learning forum to communicate with teaching staff.	8718	3.1 (0.9)	4.1	23.2	28.7	42.9	1.1
Used an online learning system to discuss or complete an assignment.	8712	2.5 (1.1)	21.1	28.9	21.2	20.9	7.8
Asked questions or contributed to discussions online.	8715	2.1 (1.0)	26.3	39.2	15.4	11.1	8.0
Made an online presentation.	8712	1.4 (0.8)	58.1	14.3	6.0	2.9	18.8

<sup>\*</sup> Based on those who answered the question (i.e., only excluding those who skipped the question)

<sup>\*\*</sup> Based on those who provided a rating of 1, 2, 3, or 4 (i.e., excluding those who indicated N/A)

Note:

- Ordered from highest to lowest mean score.

**To what extent does your university emphasise using computers in academic work?**

$n = 8699$  (99.8%) who provided a rating

Mean = 3.5 ( $SD = 0.7$ )

1.4%	1	Very little
9.6%	2	Some
29.4%	3	Quite a bit
59.5%	4	Very much

**To what extent has your experience at this university contributed to your knowledge, skills, and personal development in using computing and information technology?**

$n = 8707$  (99.9%) who provided a rating

Mean = 2.9 ( $SD = 1.0$ )

9.4%	1	Very little
26.3%	2	Some
34.7%	3	Quite a bit
29.6%	4	Very much

**How much of your course work and study do you do online?**

$n = 8687$  (99.6%) who provided a rating

Mean = 2.9 ( $SD = 0.9$ )

7.4%	1	None
25.5%	2	About a quarter
34.0%	3	About half
33.1%	4	All or nearly all

Using the scale below, please rate how satisfied you have been, overall, with each of the following services or facilities provided by your University:

Response options: 1 - Not at all satisfied; 2 - Not very satisfied; 3 - Somewhat satisfied; 4 - Very satisfied; 5 - Extremely satisfied; N/A - Not applicable; Did not use (dnu) – Eligible to use service/facility but chose not to use it; Used external (ext) – Chose to use a service/facility that is not run by a university provider

Question	N*	Mean (SD)**	Percent of endorsements							
			1	2	3	4	5	ext	dnu	N/A
Library facilities/ services.	8715	4.0 (0.7)	0.3	2.0	19.2	52.4	22.1	0.6	2.8	0.6
Health and counselling facilities/ services.	8705	3.7 (1.0)	1.5	4.3	13.2	22.0	11.5	3.9	32.6	11.0
Sport and recreation facilities/ services.	8706	3.6 (0.9)	1.3	3.9	15.9	19.9	6.4	3.4	36.0	13.2
Campus buildings and environment.	8716	3.6 (0.9)	1.7	7.1	30.9	39.8	11.7	0.5	3.3	5.0
Information technology facilities/ services.	8711	3.6 (0.8)	1.4	6.3	30.6	37.7	9.0	0.9	9.7	4.3
Cultural support facilities/ services for Māori students.	8681	3.5 (1.1)	0.8	1.2	4.3	5.3	2.4	0.1	15.9	70.0
Disability support facilities/ services.	8673	3.5 (1.1)	0.6	0.9	2.5	2.8	1.7	0.02	9.7	81.7
Study/ work spaces.	8717	3.5 (0.9)	2.2	9.2	30.1	32.4	9.5	1.2	9.0	6.4
Cultural support facilities/ services for Pasifika students.	8665	3.4 (1.0)	0.5	0.7	3.1	2.7	1.0	0.1	10.7	81.2
Administrative support services.	8696	3.4 (0.8)	1.7	7.0	33.0	31.8	5.1	0.3	15.8	5.3
Spiritual support facilities/ services (e.g., chaplains).	8671	3.2 (1.2)	1.1	1.3	3.1	3.1	1.2	1.9	26.7	61.5
Cultural support facilities/ services for International students.	8691	3.1 (1.0)	1.2	2.3	5.9	4.4	1.1	0.1	11.5	73.5
Childcare facilities/ services.	8672	3.0 (1.3)	1.2	0.7	1.9	1.5	0.8	1.0	10.9	82.1

\* Based on those who answered the question (i.e., only excluding those who skipped the question)

\*\* Based on those who provided a rating of 1, 2, 3, 4, or 5 (i.e., excluding those who indicated N/A, dnu, or ext)

Note:

- Ordered from highest to lowest mean score.



**Overall, has your study programme been worth the time, cost and effort?**

$n = 8713$  (99.9%) who provided a rating

Mean = 4.08 ( $SD = 0.95$ )

1.4%	1	Definitely no
5.0%	2	
17.7%	3	
36.0%	4	
40.0%	5	Definitely yes

**Has your overall experience at university met your expectations?**

$n = 8717$  (99.98%) who provided a rating

Mean = 3.84 ( $SD = 0.97$ )

2.0%	1	Definitely no
7.5%	2	
22.3%	3	
41.2%	4	
27.0%	5	Definitely yes

**Would you like to retain links with your university (e.g., Alumni)?**

$n = 8707$  (99.9%) who provided a rating

Mean = 3.65 ( $SD = 1.1$ )

3.4%	1	Definitely no
12.5%	2	
27.4%	3	
29.8%	4	
27.0%	5	Definitely yes

**Would you like to retain social connections formed at university (e.g., class reunions, keeping in touch with university friends)?**

$n = 8703$  (99.8%) who provided a rating

Mean = 4.00 ( $SD = 1.13$ )

3.2%	1	Definitely no
9.4%	2	
16.8%	3	
25.3%	4	
45.3%	5	Definitely yes

## Reflecting on your University Experience

To make graduates more employable, what level of importance do you think your university should give to:

Response options ranged from 1 = Low to 5 = High			Percent of endorsements				
Item	<i>n</i>	Mean ( <i>SD</i> )	1	2	3	4	5
Developing skills needed for professional practice.	8711	4.48 (0.77)	0.6	1.7	8.3	27.5	61.9
Critical thinking and analysis.	8709	4.44 (0.74)	0.3	1.4	9.3	31.7	57.4
Ensuring that teaching staff have current workplace experience and knowledge.	8702	4.40 (0.83)	0.8	2.1	11.2	28.5	57.4
Fieldwork, placements and internships.	8679	4.28 (0.98)	2.4	3.8	11.7	27.1	54.9
Transferability of skills and knowledge.	8709	4.40 (0.74)	0.3	1.2	10.3	34.6	53.7
Creative/innovative thinking.	8710	4.35 (0.79)	0.4	1.7	12.2	33.7	52.0
Ensuring that teaching staff have current research experience and knowledge.	8704	4.32 (0.84)	0.8	2.3	12.7	32.8	51.4
Excellence in written and oral communication skills.	8712	4.34 (0.79)	0.3	1.8	12.8	34.0	51.0
Research skills (e.g., finding, evaluating, and filtering sources of information).	8712	4.29 (0.81)	0.5	2.2	13.3	35.7	48.4
Laboratories/experiential learning.	8627	4.11 (0.96)	2.1	3.5	17.9	34.7	41.8
Tutorials.	8698	4.12 (0.92)	1.5	3.8	17.1	36.2	41.5
Encouraging students to study specific areas of interest in greater depth.	8701	4.12 (0.89)	1.1	3.5	17.6	38.4	39.4
High quality careers advice.	8684	3.99 (0.99)	1.9	5.8	21.3	33.6	37.4
Teaching foundation skills like reading, writing, speaking and problem-solving.	8706	3.85 (1.13)	4.1	9.5	20.0	30.6	35.8
Lectures.	8704	4.00 (0.93)	1.2	4.6	22.3	36.5	35.4
Preparation for employment in the international context.	8689	3.82 (1.06)	3.2	7.8	24.9	32.5	31.6
Proficient use of technology and social media.	8700	3.90 (0.94)	1.7	5.0	24.1	40.2	29.0
Supportive learning environments (e.g., mentorship, pastoral care).	8697	3.77 (1.03)	2.3	8.5	27.0	33.6	28.5
Encouraging engagement between students and the community.	8697	3.74 (1.04)	2.9	8.6	28.0	32.9	27.7
Ability to meet the needs of Māori in your chosen profession.	8445	3.02 (1.34)	18.7	14.8	29.2	20.0	17.3

Note:

- Ordered from most to least frequently endorsed '5' ratings.

## Benefits of a University Education

We would like to know how you believe your university education will benefit you in the future. Please rate the degree to which you think your university education has provided you with a good basis for the following:

Response options ranged from 1 = Not at all to 5 = To a very high degree

Item	<i>n</i>	Mean ( <i>SD</i> )	Percent of endorsements				
			1	2	3	4	5
Personal development?	8712	4.09 (0.88)	1.0	4.4	15.9	41.8	37.0
Obtaining employment?	8699	3.83 (1.05)	3.3	8.1	21.3	37.0	30.3
Your career?	8699	3.91 (0.96)	2.0	6.3	20.4	41.4	29.9
Undertaking further study?	8704	3.83 (1.02)	3.1	6.8	22.8	38.7	28.5
Being a role model (for education) within your own family or community?	8686	3.60 (1.10)	5.1	10.3	26.9	34.8	22.9
Geographic mobility, including moving overseas?	8676	3.58 (1.09)	5.1	10.5	27.7	35.4	21.4
Performing work tasks?	8705	3.70 (0.96)	2.1	8.6	26.3	42.8	20.1
A good income?	8692	3.53 (1.03)	4.3	10.2	30.9	37.6	17.1
Developing leadership skills?	8709	3.38 (1.09)	5.9	14.4	30.3	34.1	15.3
Status and respect?	8695	3.49 (1.01)	4.2	10.6	32.8	37.2	15.2
Engagement with community?	8689	3.24 (1.14)	7.7	17.6	32.7	27.2	14.8
Acceptance by others?	8689	3.42 (1.05)	5.6	11.4	33.2	35.3	14.5
Enabling you to develop a secure identity?	8677	3.36 (1.08)	6.5	12.7	33.3	33.3	14.3
Job security?	8687	3.30 (1.10)	7.0	14.7	33.2	30.9	14.2
Developing entrepreneurial skills?	8694	2.90 (1.15)	13.7	21.5	34.2	22.3	8.4

Note:

- Ordered from most to least frequently endorsed '5' ratings.

## Academic Beliefs

The following statements and questions relate to your beliefs about your academic abilities and values. Please indicate how you feel about each statement or question.

### Academic engagement

Response options: 1 = Strongly disagree to 7 = Strongly agree

- I really don't care what academic achievements say about my intellectual capacity.
- Academic achievement will not change my opinion of how intelligent I am.
- How I do academically has little relation to who I really am.

Data were summed to create a total score for all 3 items (min = 3, max = 21). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8705 respondents (99.8%). Higher scores reflect greater academic engagement.

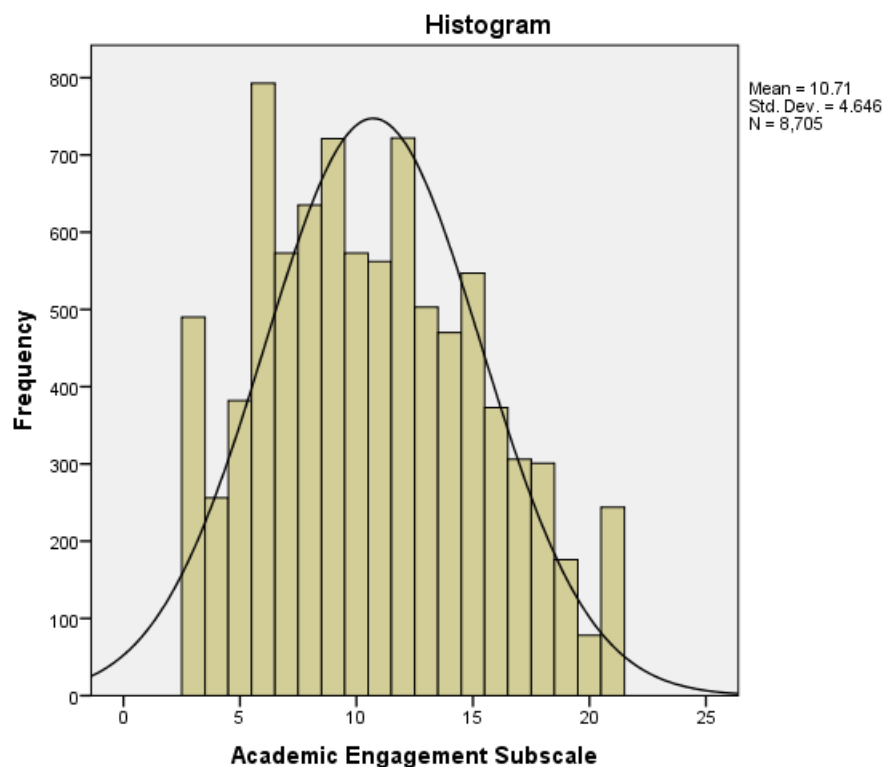
Mean = 10.7 ( $SD = 4.6$ )

Median = 10.0

Mode = 6

Range = 3 – 21

Interquartile range = 7.0 – 14.0



### Academic self-esteem

Response options: 1 = Definitely false to 8 = Definitely true

- I enjoy doing work for most academic subjects.
- I like most academic subjects.
- I'm good at most academic subjects.
- I learn quickly in most academic subjects.
- I get good marks in most academic subjects.

Data were summed to create a total score for all 5 items (min = 5, max = 40). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8697 respondents (99.7%). Higher scores reflected great academic self-esteem.

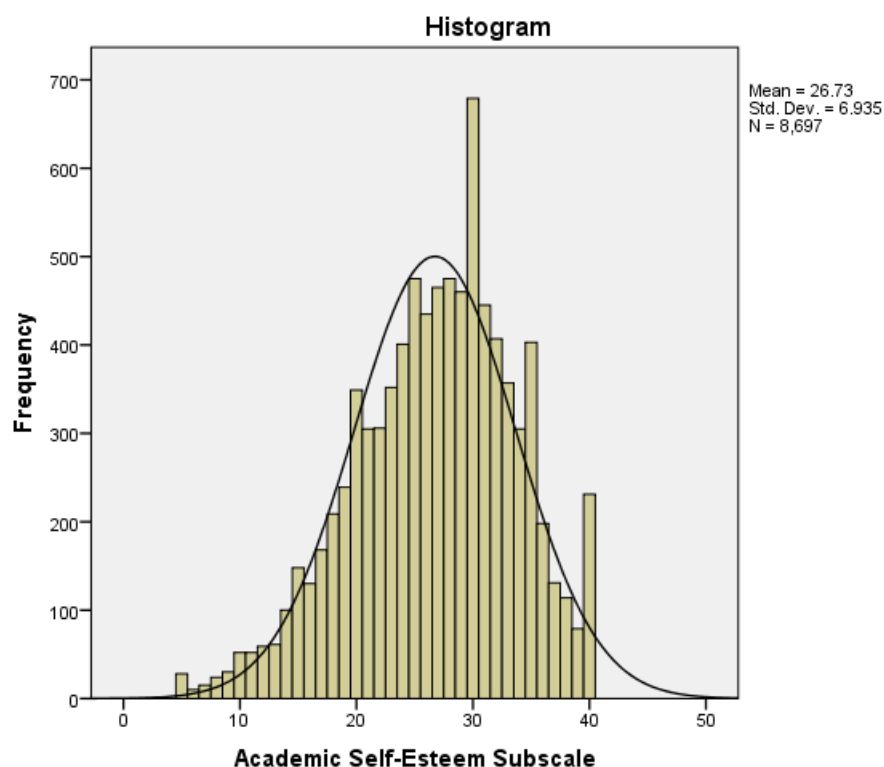
Mean = 26.7 ( $SD = 6.9$ )

Median = 27.0

Mode = 30

Range = 5 – 40

Interquartile range = 22.0 – 32.0



### Academic self-efficacy

Response options: 1 = Not at all to 5 = Very well

- How well can you get lecturers/ tutors/ supervisors to help you when you get stuck on academic tasks?
- How well can you study when there are other interesting things to do?
- How well can you study for academic tests and exams?
- How well can you succeed in passing all your university courses?
- How well do you succeed in satisfying your lecturers/ supervisors in academic tasks?

Data were summed to create a total score for all 5 items (min = 5, max = 25). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8709 respondents (99.9%). Higher scores reflect greater academic self-efficacy.

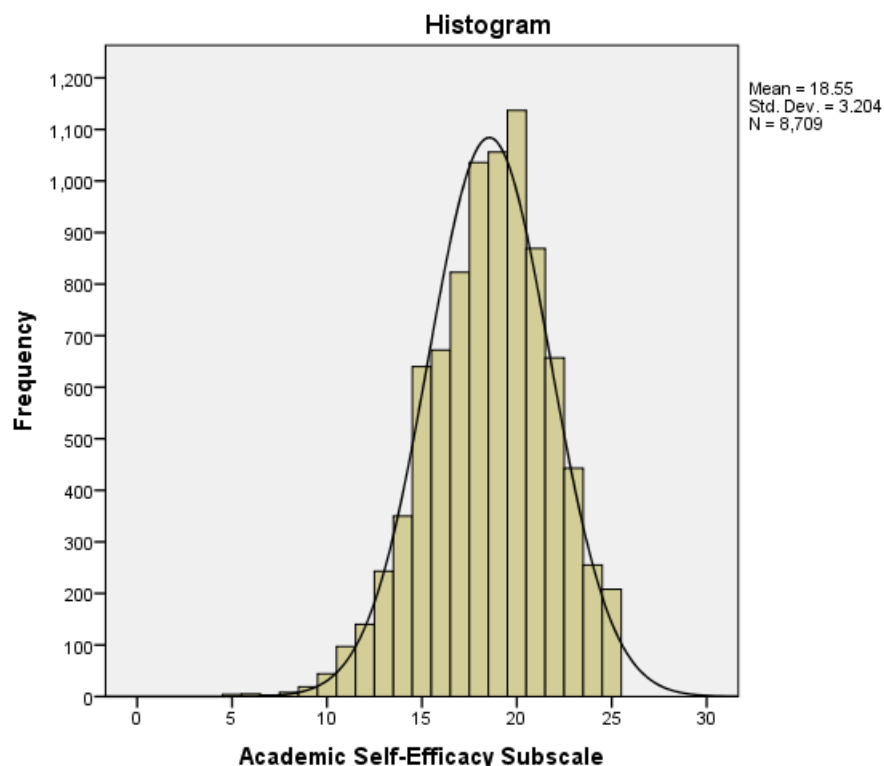
Mean = 18.6 ( $SD = 3.2$ )

Median = 19.0

Mode = 20

Range = 5 – 25

Interquartile range = 16.0 – 21.0



## Overall Impressions

### How would you evaluate your entire experience at your university?

$n = 8715$  (99.95%) who provided a rating  
Mean = 3.93 ( $SD = 0.82$ )

1.2%	1	Poor
3.8%	2	
19.0%	3	
53.0%	4	
22.9%	5	Excellent

### Would you recommend your university to others?

$n = 8715$  (99.95%) who provided a rating  
Mean = 4.18 ( $SD = 0.96$ )

1.7%	1	Definitely no
4.4%	2	
14.9%	3	
31.9%	4	
47.1%	5	Definitely yes

## Future Plans and Career Aspirations

In the next two years do you intend to pursue a career (long term progression), a job (something immediate that will provide you with a wage), or pursue further study? Select all that apply.

73.4%	Career
48.9%	Job
45.1%	Further study
16.6%	All of the above
2.9%	Other:
1.6%	Travel
0.4%	Caregiving/family
0.3%	Miscellaneous
0.2%	Unspecified employment
0.1%	Undecided
0.1%	Volunteer work
0.1%	Retirement
0.03%	Unclear
0.05%	Skipped question
0.1%	Skipped question

Note:

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Participants who endorsed the 'all of the above' option were also included as endorsing the 'career,' 'job,' and 'further study' options.
- Ordered from most to least frequently endorsed.

In the next two years do you plan to... Select all that apply.

82.6%	Work in New Zealand
37.2%	Work overseas
8.3%	Work in your country of origin
3.5%	None of the above
0.1%	Skipped question

Note:

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.



The following table displays the proportion of international and domestic students (PhD and non-PhD) who planned to stay in New Zealand to work or to work overseas (either in their country of origin or another country).

**Table 1.67. Relocation plans for the next two years of domestic vs. international students**

Plans	PhD student status				Student status				Total	
	Domestic PhD		International PhD		Domestic		International			
Work in New Zealand	183	(82.1%)	104	(49.1%)	6422	(85.7%)	497	(62.8%)	7206	(82.6%)
Work overseas	96	(43.0%)	94	(44.3%)	2858	(38.1%)	198	(25.0%)	3246	(37.2%)
Work in your country of origin	18	(8.1%)	109	(51.4%)	272	(3.6%)	329	(41.5%)	728	(8.3%)
None of the above	3	(1.3%)	2	(0.9%)	258	(3.4%)	41	(5.2%)	304	(3.5%)
Skipped question					7	(0.1%)	6	(0.8%)	13	(0.1%)
Total*	223	(2.6%)	212	(2.4%)	7492	(85.9%)	792	(9.1%)	8719	

\* The column totals refer to the total numbers and proportions of domestic and international students, not the total number of participants endorsing each item. Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the column total (i.e., total number of domestic and international students).

**If you are seeking employment in the next two years what area/field are you planning to seek employment in? Select all that apply.**

21.9%	Education and training
16.0%	Health care and medical
12.1%	Science and technology
11.9%	Academia
11.2%	Government
8.8%	Marketing and communications
7.8%	Banking and financial services
7.5%	Environment and conservation
7.4%	Community services and development
6.8%	Arts
6.7%	Administration and office support
6.5%	Consulting and strategy
6.3%	Self employment
6.1%	Media
6.0%	Accounting
5.7%	Information and communication technology
5.6%	Hospitality and tourism
5.4%	Human resources and recruitment
4.7%	Design and architecture
4.5%	Retail and consumer products
4.4%	Engineering
4.3%	Social work
4.0%	Advertising
3.9%	Sales
3.9%	Sport and recreation
3.6%	Legal
3.5%	Farming and agriculture
2.7%	Mining, resources and energy
2.3%	Call centre and customer services
2.1%	Trades and services
2.0%	Transport and logistics
1.7%	Manufacturing
1.6%	Animal welfare
1.5%	Defence
1.4%	Construction
1.4%	Real estate and property
1.0%	Insurance and superannuation
1.2%	Other:
0.2%	Archaeology/Heritage
0.2%	Project Management/Research
0.1%	Undecided
0.1%	Anything
0.01%	Miscellaneous
0.4%	Unclear
0.1%	Skipped question
6.0%	Not seeking employment in the next two years
0.6%	Skipped question

Note:

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.

**What are you looking for in a career/job? Please select all that apply.**

84.8%	Job satisfaction
68.8%	Financial security
67.9%	Opportunity to apply knowledge and skills
67.9%	A good work/life balance
61.2%	Opportunities for advancement
61.2%	Skill development
54.4%	Intellectual challenge and stimulation
54.0%	The opportunity to make a contribution/difference
50.2%	Opportunity to work with others
47.4%	Earning potential
44.9%	Flexibility
42.6%	Location
42.3%	Opportunity to travel or have an overseas experience
42.0%	Job security
35.0%	Respect
32.6%	Opportunity for further study
31.8%	Ethical workplace
31.1%	Professional recognition
27.1%	Culturally aware workplace
27.0%	Environmentally aware workplace
25.5%	Compatibility with workplace values
19.0%	Status
17.4%	Meets family expectations
14.2%	Accommodates caregiving roles (e.g., parenting, caring for elderly family member)
12.2%	Opportunity to contribute to Māori community
9.5%	Opportunity to contribute to Pacific community
0.8%	Other:
0.2%	Miscellaneous
0.1%	Enjoyment
0.1%	Supportive environment
0.05%	Self-actualisation
0.03%	Creativity
0.03%	Variety
0.02%	Don't know
0.02%	Safety
0.02%	Travel
0.2%	Unclear
0.05%	Skipped question
0.5%	Skipped question

**Note:**

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.

Please rank the top 3 reasons that are important to you in terms of choosing a career/job, numbering from 1 as the most important. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

52.3%	Job satisfaction
41.0%	Financial security
25.7%	A good work/life balance
22.2%	The opportunity to make a contribution/difference
21.6%	Opportunity to apply knowledge and skills
19.3%	Intellectual challenge and stimulation
17.3%	Opportunities for advancement
14.3%	Earning potential
12.8%	Skill development
9.7%	Opportunity to travel or have an overseas experience
7.4%	Job security
6.6%	Location
6.3%	Flexibility
5.6%	Opportunity to work with others
3.9%	Opportunity for further study
3.6%	Professional recognition
2.9%	Accommodates caregiving roles (e.g., parenting, caring for elderly family member)
2.7%	Respect
2.5%	Ethical workplace
2.3%	Compatibility with workplace values
1.9%	Meets family expectations
1.6%	Status
1.6%	Opportunity to contribute to Māori community
1.3%	Culturally aware workplace
1.3%	Environmentally aware workplace
0.9%	Opportunity to contribute to Pacific community
0.5%	Other
1.7%	Skipped question

Note:

- Percentage refers to the cumulative proportion of the total sample ( $N = 8,719$ ) who gave each item a rank of 1, 2, or 3, hence percentages do not sum to 100%.
- Ordered from most to least frequently ranked.

**Where would you like to be in 10 years time? Select all that apply.**

73.6%	In full-time employment
50.2%	Establishing my career further
50.0%	Partnered/married
30.0%	Parenting/caregiving
27.1%	Living and working overseas
18.4%	Self employed
17.2%	Engaging in further study
15.0%	Doing voluntary work
13.8%	In part-time employment
3.2%	Retired
0.8%	Other:
0.2%	Having good quality of life/work
0.1%	Don't know
0.1%	Miscellaneous
0.1%	Carrying out life's ambition
0.1%	Semi-retired
0.05%	Alive
0.05%	Travelling
0.03%	Living in New Zealand
0.03%	Skipped question
0.1%	Skipped question

**Note:**

- Participants were able to endorse as many items as applied, hence percentages do not sum to 100%. Percentages are expressed as proportions of the total sample ( $N = 8,719$ ) who endorsed each item.
- Ordered from most to least frequently endorsed.

## Goals, Aspirations and Values

Please indicate how important each of the following are to you.

Response options: 1 - Not at all important; 2 - Not very important; 3 - Somewhat important; 4 - Very important; 5 - Extremely important

Question	N	Mean (SD)	Percent of endorsements				
			1	2	3	4	5
Being in good health?	8716	4.6 (0.6)	0.1	0.2	4.5	30.4	64.7
Having a family-friendly work/life balance?	8714	4.4 (0.7)	0.4	1.3	8.7	36.5	53.1
Working ethically?	8703	4.3 (0.8)	0.4	1.6	10.8	41.1	46.2
Having a life-long partner?	8679	4.2 (1.0)	1.8	4.7	16.5	30.3	46.8
Having children and a career?	8611	4.0 (1.1)	3.7	6.2	19.5	33.1	37.5
Making a difference?	8710	4.0 (0.8)	0.5	3.6	24.6	43.1	28.1
Contributing to environmental sustainability?	8709	3.9 (0.9)	1.3	5.1	26.7	40.3	26.7
Being unselfish?	8703	3.9 (0.8)	0.7	4.0	26.9	45.2	23.1
Travelling?	8715	3.8 (1.0)	1.3	8.0	27.6	37.5	25.7
Professional recognition?	8711	3.7 (0.9)	1.6	7.7	30.5	41.9	18.3
Being culturally responsive?	8688	3.7 (0.9)	2.1	6.7	28.6	40.2	22.4
Contributing to iwi/society?	8653	3.6 (1.0)	4.6	7.7	29.6	37.1	20.9
Furthering your education?	8708	3.5 (1.0)	2.4	12.4	34.3	35.3	15.7
Having children rather than a career?	8436	2.9 (1.1)	11.7	21.9	41.0	18.7	6.8
Being entrepreneurial?	8682	2.8 (1.1)	10.6	30.9	35.0	16.1	7.4
Being a religious/spiritual person?	8644	2.7 (1.4)	28.2	21.4	20.9	14.0	15.6
In general, how important are religious or spiritual beliefs in your day-to-day life?	8666	2.6 (1.4)	32.9	20.7	18.1	13.1	15.2
Having a career rather than children?	8471	2.3 (1.0)	24.4	36.3	27.1	8.9	3.4

Note:

- Ordered from highest to lowest mean score.

## Conventional values

Please indicate how important each of the following are to you.

Response options: 1 - Not at all important; 2 - Not very important; 3 - Somewhat important; 4 - Very important; 5 - Extremely important

- Owning your own home?
- Having a great deal of money?
- Having a well-paid job?
- Having a good reputation in the community?
- Working hard to get ahead?
- Having a university education?
- Saving money for the future?
- Being careful about what you spend?

Data were summed to create a total score for all 8 items (min = 8, max = 40). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8715 respondents (99.95%). Higher scores reflect greater endorsement of conventional values.

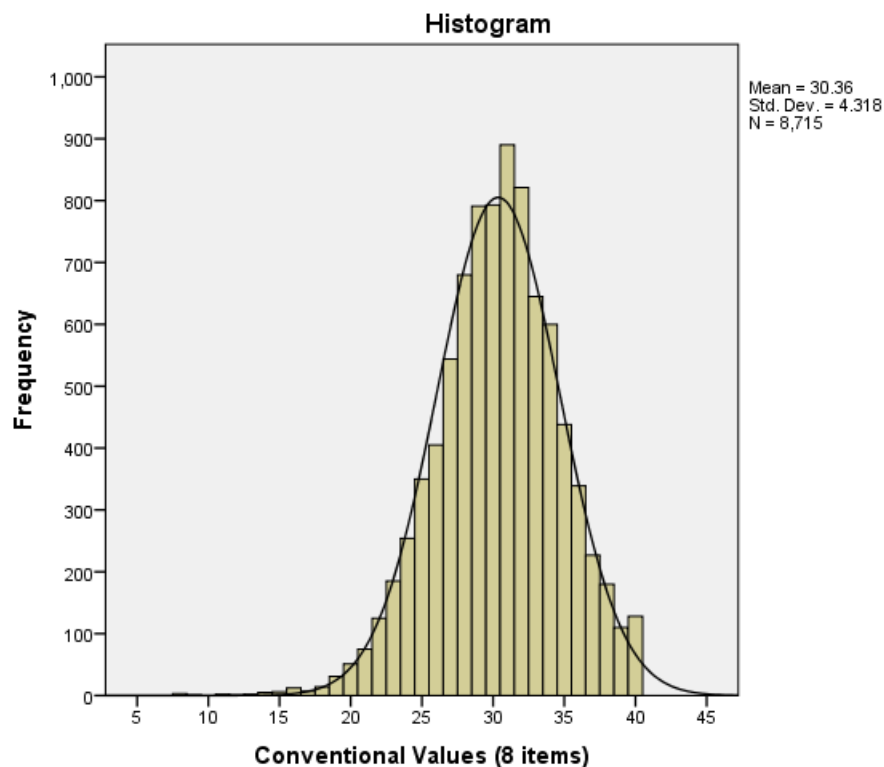
Mean = 30.4 ( $SD = 4.3$ )

Median = 31.0

Mode = 31

Range = 8 – 40

Interquartile range = 28.0 – 33.0





## Altruism

Please indicate how important each of the following are to you.

Response options: 1 - Not at all important; 2 - Not very important; 3 - Somewhat important; 4 - Very important; 5 - Extremely important

- Giving everyone an equal chance in life?
- Improving the welfare of people in need?

Data were averaged to create a mean score for both items. If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8706 respondents (99.9%). Higher scores reflect greater orientation towards altruistic values.

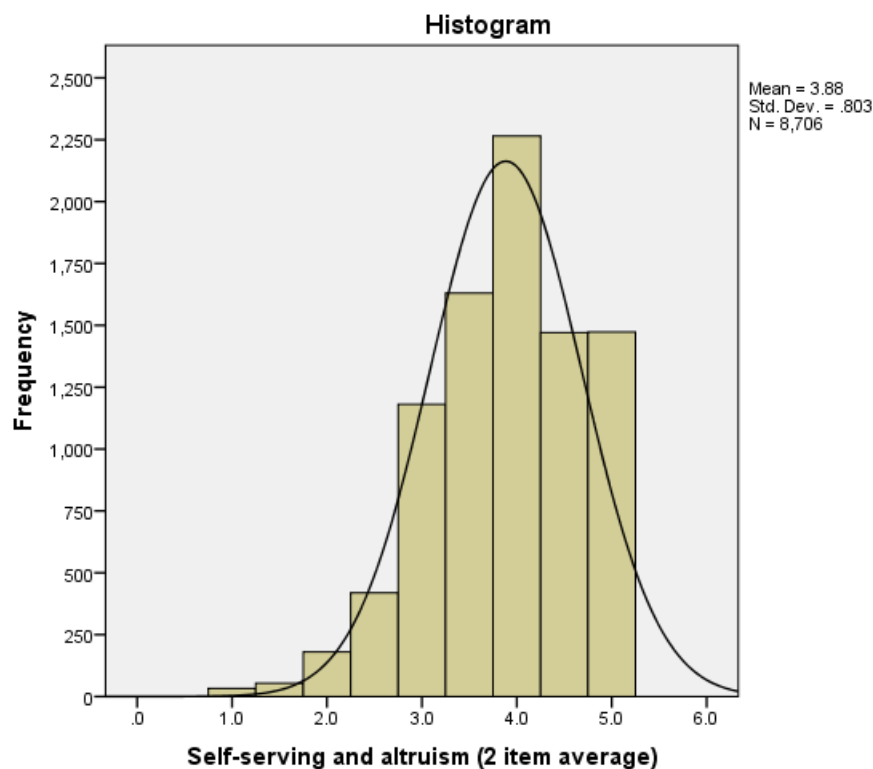
Mean = 3.9 ( $SD = 0.8$ )

Median = 4.0

Mode = 4.0

Range = 1.0 – 5.0

Interquartile range = 3.5 – 4.5



## Earnings and Assets

### Are you currently employed?

39.5%	No
22.9%	Yes, full-time
35.1%	Yes, part-time
2.4%	Yes, self-employed
0.1%	Skipped question

### How much is this work related to your field of study?

$n = 5253$  respondents (60.25%) who had indicated they were employed  
Mean = 3.26 ( $SD = 1.6$ )

22.3%	1	Not at all
13.0%	2	Very little
14.3%	3	Some
17.4%	4	Quite a bit
32.9%	5	Very much

### How much are you able to apply the skills you are gaining from your studies to your primary job (e.g., communication, analytical, teamwork, leadership, etc.)?

$n = 5253$  (60.25%) respondents who had indicated they were employed  
Mean = 3.50 ( $SD = 1.26$ )

8.2%	1	Not at all
14.7%	2	Very little
24.1%	3	Some
25.1%	4	Quite a bit
27.9%	5	Very much

**Please indicate your current total income per annum (include loans, scholarships and benefits etc.).**

2.2%	Loss
8.2%	Zero income
9.3%	NZ\$1 - NZ\$5,000
13.5%	NZ\$5,001 - NZ\$10,000
12.8%	NZ\$10,001 - NZ\$15,000
9.7%	NZ\$15,001 - NZ\$20,000
5.3%	NZ\$20,001 - NZ\$25,000
3.9%	NZ\$25,001 - NZ\$30,000
2.8%	NZ\$30,001 - NZ\$35,000
2.7%	NZ\$35,001 - NZ\$40,000
5.4%	NZ\$40,001 - NZ\$50,000
3.8%	NZ\$50,001 - NZ\$60,000
3.4%	NZ\$60,001 - NZ\$70,000
3.0%	NZ\$70,001 - NZ\$80,000
1.9%	NZ\$80,001 - NZ\$90,000
0.9%	NZ\$90,001 - NZ\$100,000
0.7%	NZ\$100,001 - NZ\$110,000
0.5%	NZ\$110,001 - NZ\$120,000
0.4%	NZ\$120,001 - NZ\$130,000
0.2%	NZ\$130,001 - NZ\$140,000
0.2%	NZ\$140,001 - NZ\$150,000
0.8%	NZ\$150,001 +
6.6%	Don't know
1.9%	Skipped question

**Approximately how much student loan debt do you have?**

19.2%	Didn't take out a student loan
7.0%	Zero
4.4%	NZ\$1 - NZ\$5,000
7.7%	NZ\$5,001 - NZ\$10,000
8.5%	NZ\$10,001 - NZ\$15,000
10.3%	NZ\$15,001 - NZ\$20,000
8.8%	NZ\$20,001 - NZ\$25,000
7.8%	NZ\$25,001 - NZ\$30,000
6.1%	NZ\$30,001 - NZ\$35,000
5.5%	NZ\$35,001 - NZ\$40,000
5.3%	NZ\$40,001 - NZ\$50,000
2.9%	NZ\$50,001 - NZ\$60,000
1.2%	NZ\$60,001 - NZ\$70,000
0.7%	NZ\$70,001 - NZ\$80,000
0.4%	NZ\$80,001 - NZ\$90,000
0.3%	NZ\$90,001 - NZ\$100,000
0.5%	NZ\$100,001+
2.7%	Don't know
0.7%	Skipped question

**Approximately how much other debt do you have (e.g., overdrafts, hire purchases, mortgage, credit card, other loans)?**

49.4%	Zero
26.1%	NZ\$1 - NZ\$5,000
3.8%	NZ\$5,001 - NZ\$10,000
1.8%	NZ\$10,001 - NZ\$15,000
0.8%	NZ\$15,001 - NZ\$20,000
0.6%	NZ\$20,001 - NZ\$25,000
0.5%	NZ\$25,001 - NZ\$30,000
0.4%	NZ\$30,001 - NZ\$35,000
0.4%	NZ\$35,001 - NZ\$40,000
0.5%	NZ\$40,001 - NZ\$50,000
0.4%	NZ\$50,001 - NZ\$60,000
0.3%	NZ\$60,001 - NZ\$70,000
0.3%	NZ\$70,001 - NZ\$80,000
0.4%	NZ\$80,001 - NZ\$90,000
0.6%	NZ\$90,001 - NZ\$100,000
10.9%	NZ\$100,001+
1.6%	Don't know
1.3%	Skipped question

**Do you currently have any other significant regular financial commitments per annum (e.g., child care, kinship care (elderly relative, family overseas), child support, school fees, contributions to charitable organisations, church, religious organisations)? If yes, please specify how many significant regular financial commitments you have.**

22.9% Yes  
76.0% No  
1.1% Skipped question

*N* = 1,999 who endorsed having other significant financial commitments

Mean = 2.3 (*SD* = 1.8)

Median = 2

Mode = 1

Range = 1 – 10

Interquartile range = 1.0 – 3.0

**Please specify the total annual amount.**

*N* = 1,999 who endorsed having other significant financial commitments

45.4% NZ\$1 - NZ\$5,000  
18.5% NZ\$5,001 - NZ\$10,000  
8.3% NZ\$10,001 - NZ\$15,000  
5.3% NZ\$15,001 - NZ\$20,000  
3.1% NZ\$20,001 - NZ\$25,000  
1.9% NZ\$25,001 - NZ\$30,000  
1.7% NZ\$30,001 - NZ\$35,000  
1.5% NZ\$35,001 - NZ\$40,000  
1.6% NZ\$40,001 - NZ\$50,000  
1.3% NZ\$50,001 - NZ\$60,000  
0.5% NZ\$60,001 - NZ\$70,000  
0.4% NZ\$70,001 - NZ\$80,000  
0.2% NZ\$80,001 - NZ\$90,000  
0.4% NZ\$90,001 - NZ\$100,000  
0.5% NZ\$100,001 - NZ\$250,000  
0.4% NZ\$250,001 - NZ\$500,000  
0% NZ\$500,001 +  
7.2% Don't know  
2.1% Skipped question

**What is the approximate total value of your assets (e.g., savings, iPod, furniture, personal computer, car, house)?**

2.3%	Zero
22.8%	NZ\$1 - NZ\$5,000
18.2%	NZ\$5,001 - NZ\$10,000
10.1%	NZ\$10,001 - NZ\$15,000
5.9%	NZ\$15,001 - NZ\$20,000
4.2%	NZ\$20,001 - NZ\$25,000
3.0%	NZ\$25,001 - NZ\$30,000
2.0%	NZ\$30,001 - NZ\$35,000
1.2%	NZ\$35,001 - NZ\$40,000
1.7%	NZ\$40,001 - NZ\$50,000
1.2%	NZ\$50,001 - NZ\$60,000
0.8%	NZ\$60,001 - NZ\$70,000
0.5%	NZ\$70,001 - NZ\$80,000
0.4%	NZ\$80,001 - NZ\$90,000
0.8%	NZ\$90,001 - NZ\$100,000
3.1%	NZ\$100,001 - NZ\$250,000
6.6%	NZ\$250,001 - NZ\$500,000
6.8%	NZ\$500,001 +
6.1%	Don't know
2.3%	Skipped question

## Economic Situation

**Please think about how you feel about your current financial situation. Indicate how much you agree or disagree with each statement.**

Response options: 1 - Strongly disagree; 2 – Disagree; 3 - Neutral/mixed; 4 – Agree; 5 - Strongly agree

- I have enough money to afford the accommodation I need.
- I have enough money to afford the clothing I need.
- I have enough money to afford the food I need.
- I have enough money to afford the leisure and recreational activities I want.
- Over the past 12 months I have had difficulty meeting my financial commitments.

Data were summed to create a total score for all 5 items after relevant items had been reverse coded (min = 5, max = 25). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8,696 respondents (99.7%). Higher scores reflect less economic/financial strain.

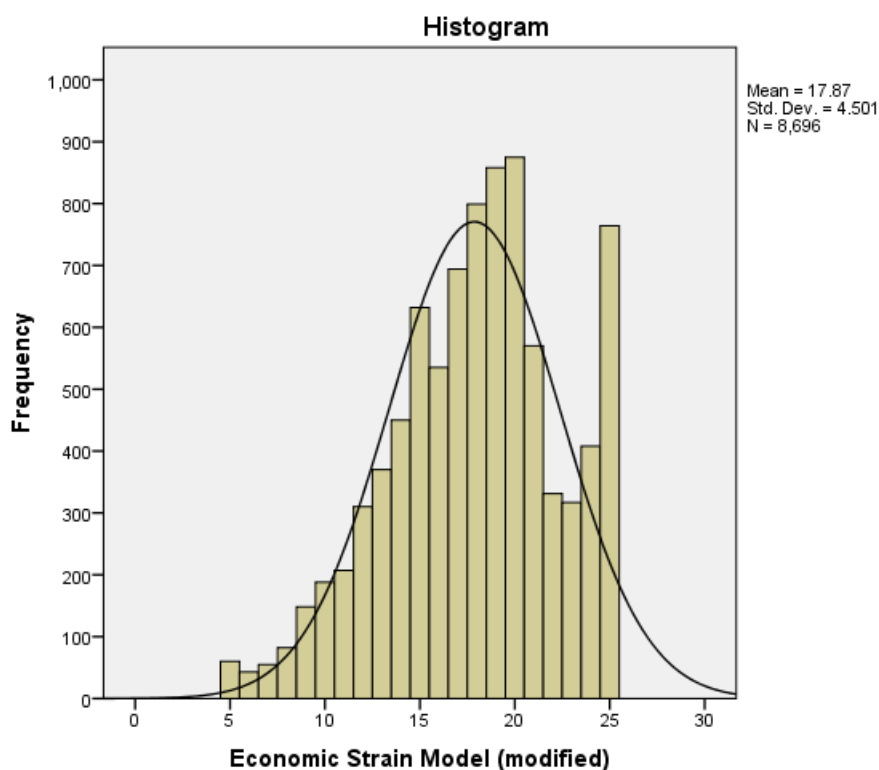
Mean = 17.9 ( $SD = 4.5$ )

Median = 18.0

Mode = 20

Range = 5 – 25

Interquartile range = 15.0 – 21.0



## General Health

### How would you rate your overall physical health?

$n = 8,713$  (99.9%) who responded to this item

Mean = 3.53 ( $SD = 0.98$ )

1.8%	1	Poor
13.4%	2	Fair
31.7%	3	Good
36.6%	4	Very good
16.5%	5	Excellent

### Do you have a long-term medical condition, impairment or disability?

85.1%	No
14.6%	Yes
0.2%	Skipped question

### Has your condition, impairment or disability affected your studies and/or work?

$n = 1277$  (14.6%) who indicated that they had a long-term medical condition (above)

51.1%	No
48.8%	Yes
0.1%	Skipped question

### If yes, please specify the extent to which it has affected your studies and/or work:

$n = 625$  (48.9%) who indicated that their condition affected their studies/work (above)

Mean = 3.2 ( $SD = 1.2$ )

8.6%	1	Very little
19.2%	2	
29.9%	3	
26.4%	4	
15.8%	5	Very much

### To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries or moving a chair?

0.7%	1	Not at all
3.5%	2	A little
6.2%	3	Moderately
9.4%	4	Mostly
80.1%	5	Completely
0.1%		Skipped question

$n = 8,711$  (99.9%) who responded to this item

Mean = 4.7 ( $SD = 0.8$ )



**Does your health limit you in doing vigorous activities, such as running, lifting heavy objects, participating in strenuous sports?**

1.2%	1	Cannot do
2.9%	2	Quite a lot
12.7%	3	Somewhat
22.2%	4	Very little
60.9%	5	Not at all
0.1%		Skipped question

$n = 8,706$  (99.9%) who responded to this item

Mean = 4.4 ( $SD = 0.9$ )

**In the last 12 months, have you smoked at least 1 cigarette each day for a month or more?**

90.4%	No
9.5%	Yes
0.1%	Skipped question

**How many cigarettes do you typically smoke each day?**

$n = 819$  (9.4%) who indicated that they smoked in the last 12 months (above) and responded to this item

Mean = 5.6 ( $SD = 5.5$ )

Median = 4.0

Mode = 0

Range = 0 – 30

Interquartile range = 1.0 – 8.0

**How often do you have a drink containing alcohol?**

11.5%	Never
9.3%	Almost never
11.7%	Less than once a month
10.7%	Once a month
14.4%	Once every two weeks
18.1%	Once a week
17.8%	Two or three times a week
4.4%	Four or five times a week
2.1%	Six or seven times a week
0.1%	Skipped question

**How many standard drinks containing alcohol do you have on a typical day when you are drinking?**

$n = 7676$  (88.0%) who indicated that they drink at least some alcohol (i.e., excluding those who indicated that they never drink alcohol) and responded to this item

Mean = 4.1 ( $SD = 3.6$ )

Median = 3.0

Mode = 2

Range = 1 – 25+ (those who endorsed 25+ drinks were assigned the lower limit value of 25)

Interquartile range = 2.0 – 5.0

**How often do you have six or more standard drinks on one occasion?**

$n = 7713$  (88.5%) who indicated that they drink at least some alcohol (i.e., excluding those who indicated that they never drink alcohol)

25.3%	Never
26.4%	Once or twice a year
17.6%	Less than monthly
17.2%	Monthly
13.0%	Weekly
0.1%	Daily or almost daily
0.3%	Skipped question

## General Feelings

### Warwick-Edinburgh Mental Wellbeing Scale

**Below are some statements about feelings and thoughts. Please select the option that best describes your experience of each of these over the last 2 weeks.**

Response options: 1 - None of the time; 2 – Rarely; 3 - Some of the time; 4 – Often; 5 - All of the time

- I've been feeling optimistic about the future.
- I've been feeling useful.
- I've been feeling relaxed.
- I've been feeling interested in other people.
- I've had energy to spare.
- I've been dealing with problems well.
- I've been thinking clearly.
- I've been feeling good about myself.
- I've been feeling close to other people.
- I've been feeling confident.
- I've been able to make up my own mind about things.
- I've been feeling loved.
- I've been interested in new things.
- I've been feeling cheerful.

Data were summed to create a total score for all 14 items. If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8,710 respondents (99.9%). Higher scores reflect greater mental wellbeing.

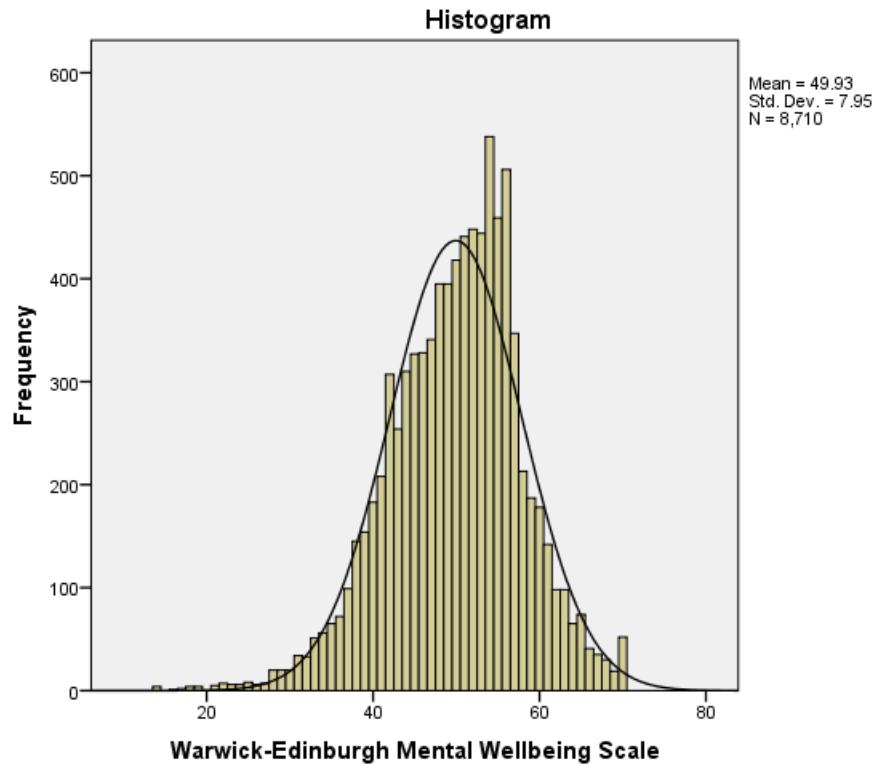
Mean = 49.93 (*SD* = 7.95)

Median = 51

Mode = 54

Range = 14 – 70

Interquartile range = 45 – 55



**Reference Data:**

- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(63). doi: 10.1186/1477-7525-5-63

Student sample was selected from undergraduates and postgraduates studying one of seven disciplines at Warwick and Edinburgh Universities in the UK.

$N = 348$

Median score = 50

Interquartile range = 45 - 55

Population sample was selected from two representative Scottish population datasets.

$N = 1,749$

Median score = 51

Interquartile range = 45 – 56

### Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Please indicate how much you agree or disagree with each statement. Your choices are:

Response options: 1 - Strongly disagree; 2 – Disagree; 3 – Agree; 4 - Strongly agree

- On the whole, I am satisfied with myself.
- I feel that I have a number of good qualities.
- I am able to do things as well as most other people.
- I feel that I'm a good person of worth, at least on an equal plane with others.
- I take a positive attitude toward myself.

Data were summed to create a total score for all 5 items (min = 5, max = 20). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8,706 respondents (99.9%). Higher scores reflect higher self-esteem.

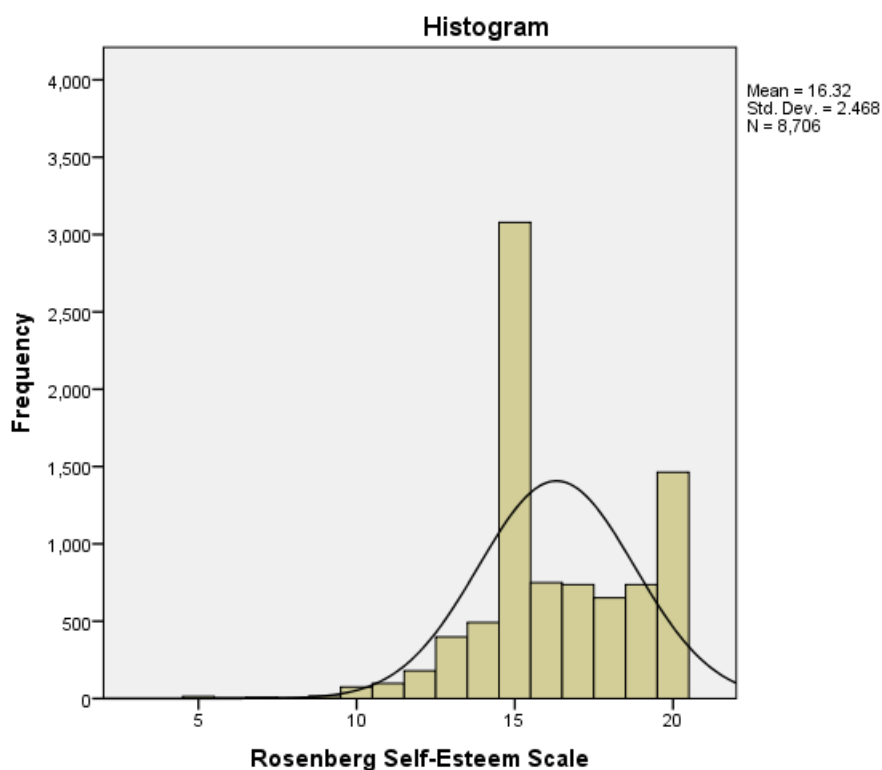
Mean = 16.3 ( $SD = 2.5$ )

Median = 15.0

Mode = 15

Range = 5 – 20

Interquartile range = 15.0 – 19.0



### General Self-Efficacy Scale

Please indicate/rate the extent to which the following statements apply to you. Your choices are:

Response options: 1 – Not at all true; 2 – Hardly true; 3 – Moderately true; 4 – Exactly true

- I am confident that I could deal efficiently with unexpected events.
- Thanks to my resourcefulness, I know how to handle unforeseen situations.
- I can remain calm when facing difficulties because I can rely on my coping abilities.
- If I am in trouble, I can usually think of a solution.
- I can usually handle whatever comes my way.

Data were summed to create a total score for all 5 items (min = 5, max = 20). If respondents had answered at least half of the questions, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). The final data set included 8,707 respondents (99.9%). Higher scores reflect a greater sense of general self-efficacy.

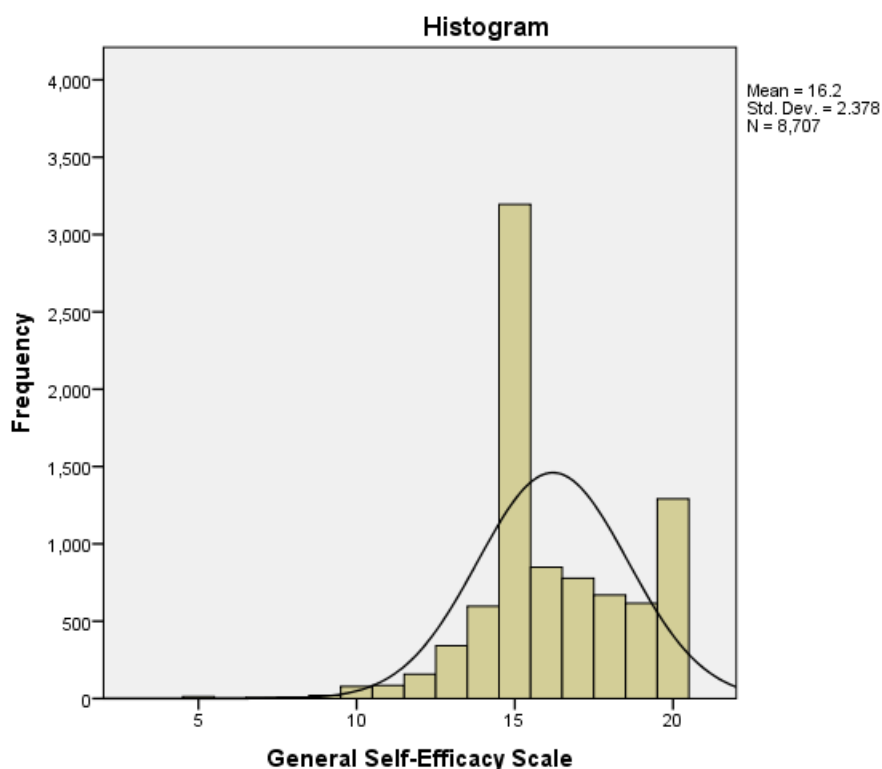
Mean = 16.2 ( $SD = 2.4$ )

Median = 15.0

Mode = 15

Range = 5 – 20

Interquartile range = 15.0 – 18.0



## Social Support

### Multidimensional Scale of Perceived Social Support

Social support was assessed using a standardised 12-item questionnaire designed to reflect 3 factor groups relating to the source of the support (family, friends, significant other).

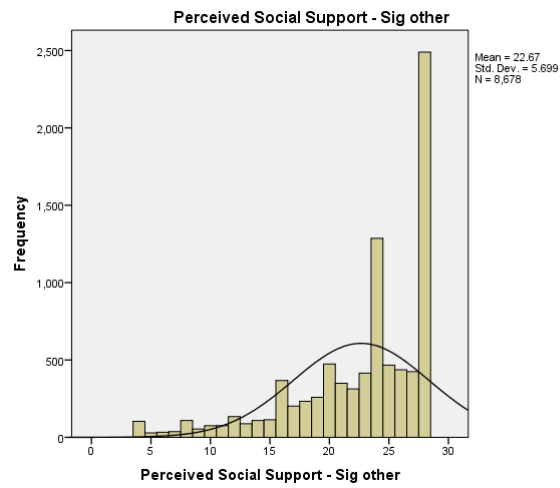
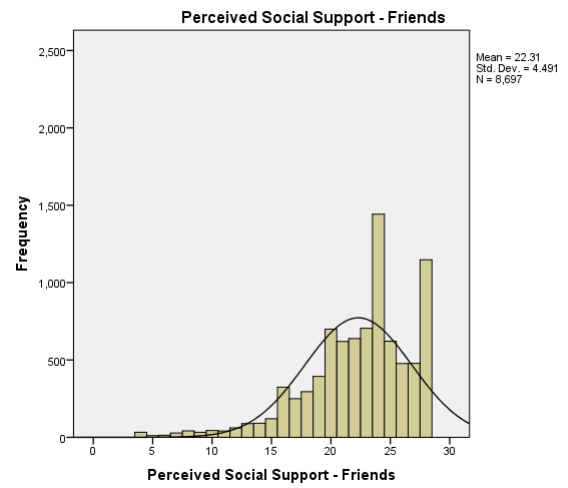
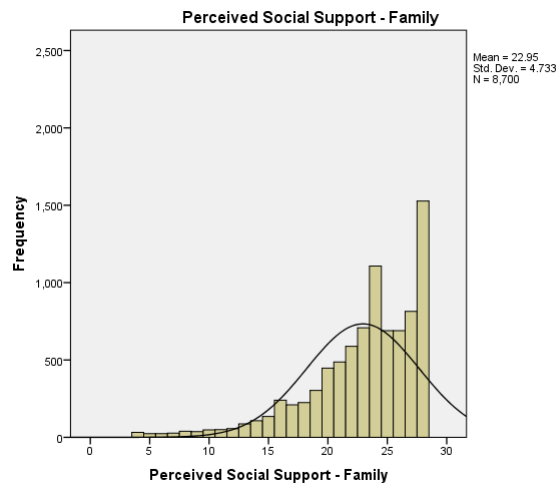
Response options: 1 - Very Strongly Disagree; 2 - Strongly Disagree; 3 - Mildly Disagree; 4 – Neutral; 5 - Mildly Agree; 6 - Strongly Agree; 7 - Very Strongly Agree

- There is a special person who is around when I am in need. [significant other]
- There is a special person with whom I can share my joys and sorrows. [significant other]
- My family really tries to help me. [family]
- I get the emotional help and support I need from my family. [family]
- I have a special person who is a real source of comfort to me. [significant other]
- My friends really try to help me. [friends]
- I can count on my friends when things go wrong. [friends]
- I can talk about my problems with my family. [family]
- I have friends with whom I can share my joys and sorrows. [friends]
- There is a special person in my life who cares about my feelings. [significant other]
- My family is willing to help me make decisions. [family]
- I can talk about my problems with my friends. [friends]

Each source of support was coded as a subscale, by computing the sum of the items within each subscale. If respondents had answered at least half of the questions within each subscale, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). Higher mean scores within each subscale indicate greater social support.

Statistic	Support from family	Support from friends	Support from significant other
<i>N</i>	8700	8697	8678
Mean ( <i>SD</i> )	22.95	22.31	22.67
Median	24.00	23.00	24.00
Mode	28	24	28
Range	4 – 28	4 – 28	4 – 28
IQ range*	21.00 – 27.00	20.00 – 25.00	20.00 – 28.00

\* IQ range = interquartile range





## Personal Characteristics

### Big Five Inventory

Personality was assessed using a standardised 44-item questionnaire designed to reflect 5 personality dimensions:

- **Extraversion:** Implies an *energetic approach* toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality.
- **Agreeableness:** Contrasts a *prosocial and communal orientation* toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty.
- **Conscientiousness:** Describes *socially prescribed impulse control* that facilitates task- and goal-directed behaviour, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks.
- **Neuroticism:** Contrasts emotional stability and even-temperedness with *negative emotionality*, such as feeling anxious, nervous, sad, and tense.
- **Openness:** Describes the breadth, depth, originality, and complexity of an individual's *mental and experiential life*.

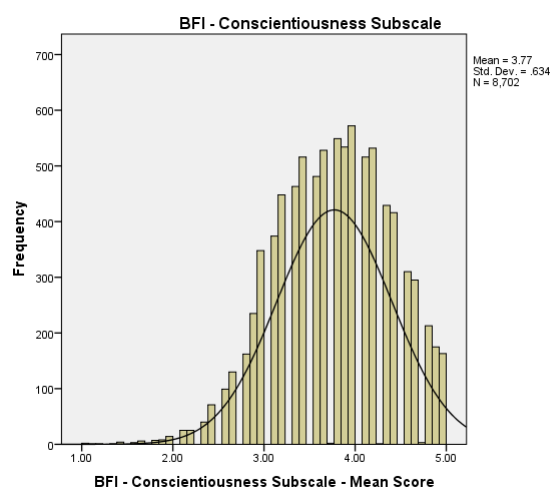
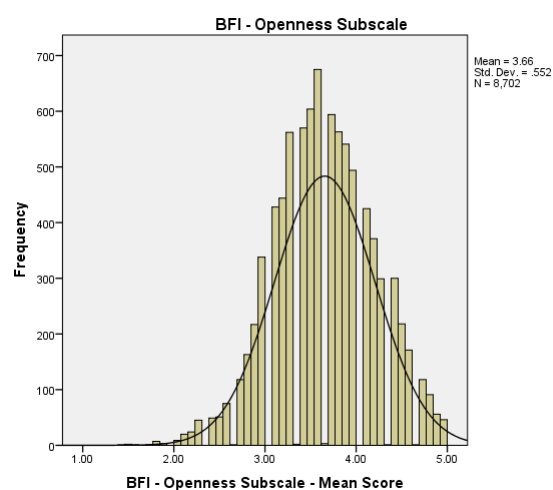
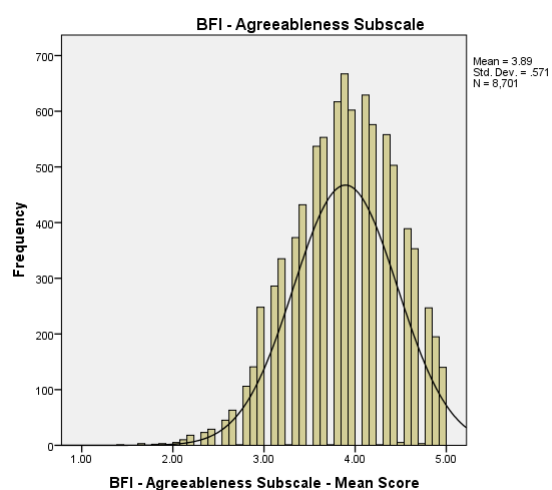
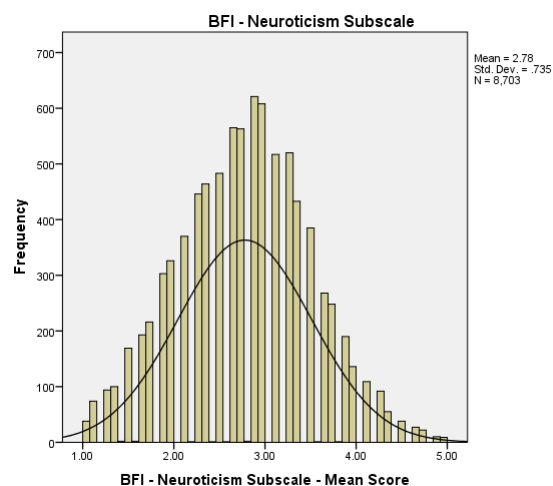
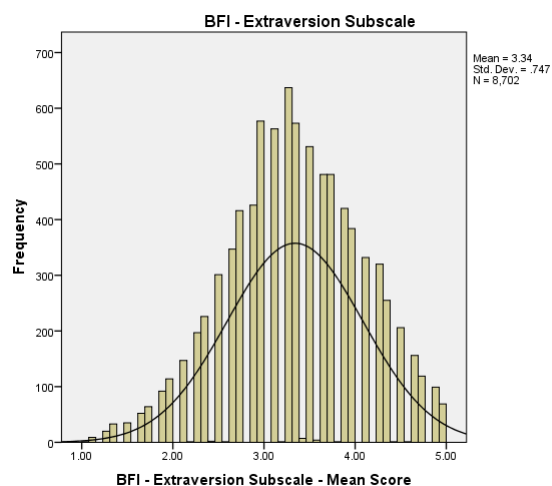
Note that the definitions above were taken directly (as-is) from:

- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big-Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York: Guilford Press.

Each personality dimension was coded as a subscale, by computing the mean of the items within each subscale, after relevant items had been reverse coded. If respondents had answered at least half of the questions within each subscale, scores for the missing questions were generated using the mean score of all other questions that had been answered (and rounding to the nearest whole number). Higher mean scores within each subscale indicate greater endorsement of those traits.

Statistic	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
<i>N</i>	8702	8701	8702	8703	8702
Mean ( <i>SD</i> )	3.34 (0.75)	3.89 (0.57)	3.77 (0.63)	2.78 (0.74)	3.66 (0.55)
Median	3.38	3.89	3.78	2.75	3.60
Mode	3.25	3.89	4.00	2.88	3.60
Range	1.00 – 5.00	1.44 – 5.00	1.00 – 5.00	1.00 – 5.00	1.40 – 5.00
IQ range*	2.88 – 3.88	3.56 – 4.33	3.33 – 4.22	2.25 – 3.25	3.30 – 4.00

\*IQ range = interquartile range



## Local Community Involvement

These questions ask about your participation in your local community, that is, where you are living now. Please choose the option that best indicates your level of community involvement.

Respondents rated how often they engage in community-related behaviours or how they might behave in certain situations on scales ranging from 1 (lowest) to 4 (highest).

Question	<i>n</i>	Mean ( <i>SD</i> )	Percent of endorsements			
			1	2	3	4
Do you take the initiative to do what needs to be done even if no one asks you to?	8694	3.31 (0.69)	1.0	10.4	45.4	43.2
Do you enjoy living among people of different lifestyles?	8658	3.29 (0.75)	1.9	11.8	41.3	44.9
Do you think that multiculturalism makes life in your area better?	8647	3.25 (0.80)	3.2	12.9	39.3	44.7
If you need information to make a life decision, do you know where to find that information?	8691	3.21 (0.79)	3.5	12.8	42.9	40.8
If you disagree with what everyone else agreed on, would you feel free to speak out?	8696	3.01 (0.84)	3.8	22.8	41.7	31.6
If you have a dispute with your neighbours (e.g., over fences or dogs) are you willing to seek mediation?	8631	2.97 (0.90)	7.1	20.3	40.9	31.7
Do you go outside your local community to visit your family?	8632	2.96 (1.03)	14.4	12.3	36.1	37.2
Have you ever picked up other people's rubbish in a public place?	8694	2.84 (0.90)	9.1	22.0	44.6	24.3
Have you attended a local community event in the past 6 months (e.g., church fair, school concert, craft exhibition)?	8693	2.46 (1.13)	29.2	18.1	30.2	22.5
Are you an active member of a local organisation or club (e.g., church, sport, marae committee, craft, social club)?	8695	2.21 (1.23)	43.9	14.2	19	22.9
In the past 3 years, have you ever taken part in a local community project?	8682	1.89 (1.05)	51.3	17.9	20.9	9.9
Do you help out a local group as a volunteer (e.g., marae, kōhanga reo, Girl Guides, Lifeline, kindergarten)?	8681	1.85 (1.06)	53.5	18.6	16.9	10.9
Have you ever been part of a project to organise a new service in your area (e.g., youth club, Scout hall, child care, recreation for disabled)?	8688	1.59 (0.94)	67.0	13.5	13.4	6.1
Are you on a management committee or organising committee for any local group or organisation (e.g., marae organisation, play centre)?	8688	1.53 (0.91)	70.2	11.5	13.1	5.2
In the past 3 years, have you ever joined a local community action to deal with an emergency?	8682	1.47 (0.83)	71.4	13.7	11.5	3.4

Note:

- Ordered from highest to lowest mean score.

## National/International Community Involvement

**Are you an active member of a national/international organisation (e.g., Red Cross, Search and Rescue, Greenpeace, Amnesty International, World Vision)?**

$n = 8,688$  (99.6%) who responded to this item

Mean = 1.64 ( $SD = 0.92$ )

61.3%	1	No, not at all
18.5%	2	
14.7%	3	
5.5%	4	Yes, very active

## Success Factors

Are there any key factors that hindered the completion of your qualification?

66.6% No  
32.9% Yes  
0.5% Skipped question

Are there any key factors that helped the completion of your qualification?

47.5% No  
51.8% Yes  
0.6% Skipped question

## APPENDIX 1. REVIEW OF EXISTING LONGITUDINAL GRADUATE STUDIES

The review of longitudinal graduate studies that follows represents our best attempt to obtain a good understanding of graduate outcome studies. There is a genuine interest in this kind of research, which is reflected in a large number of university-specific and one-off studies of a range of student outcomes and student experiences. These types of studies are not relevant here as they have not been set up as longitudinal, prospective studies of graduate outcomes. For the purposes of the present review, our comparators are those studies who explicitly set out to study university graduate outcomes over the long term.

The selection criteria for graduate studies to be included in this review were:

- An attempt to sample a group that is broadly representative of a large national or regional population
- At least one follow-up wave (in addition to baseline sampling)
- Some evidence via publications (note that most reports fall under ‘grey literature’ as they are not peer-reviewed articles)

List of longitudinal graduate studies included (by geographical region):

### Australia

- Graduate Pathways Survey (GPS)
- Australian Graduate Survey (AGS)
- Beyond Graduation Survey (BGS)
- Longitudinal Surveys of Australian Youth (LSAY)

### United Kingdom

- Destination of Leavers from Higher Education (DLHE) Longitudinal survey
- Futuretrack
- Moving On and Seven Years On, Class of '99

### Europe

- REFLEX (Research into Employment and professional FLEXibility) project
- Careers after Higher Education – a European Research Survey (CHEERS)

### Canada

- National Graduates Survey (NGS)

### United States of America

- Baccalaureate and Beyond Longitudinal Study (B&B)
- Beginning Postsecondary Students (BPS)

Each of the studies above has been reviewed using a standard template with information reported in all relevant domains. Note that all information is not always available, which has been noted where applicable. The reviews of the following studies have been organised by geographic area (as per above).

## Australia

### Graduate Pathways Survey (GPS)

Australian Council for Educational Research (ACER), Australia

#### Aim

Research undertaken by the Australian Council for Education Research (ACER) to investigate outcomes of graduates 5 years after completion of a bachelor's degree. Aimed to expand on other Australian research, which has tended to focus on one specific group of students from single institutions.

#### Specific goals:

- Examine relations between field of education and occupation industry
- Skills of university graduates
- Labour market expectations of graduates
- Perceptions of careers advice at university
- Perceptions of the benefit of a university education
- Satisfaction with university education and development of work capabilities
- Outcomes for graduates as a function of field of education, SES, geographical location, and type of institution

#### Methodology

Census approach – survey conducted in 2008 of all domestic Australian Bachelor degree graduates who completed their studies in 2002. All Australian universities participated in the study.

Graduates surveyed 5 years post-graduation and asked to provide retrospective indications of activities 1, 3, and 5 years post-graduation.

Survey contained ~160 items and assessed:

- 2002 bachelor degree(s) experience/demographics
- Activity in April 2003
- Activity in April 2005
- Activity in April 2008
- Demographics

Survey contained many items from the Australasian Survey of Student Engagement (AUSSE) and other existing instruments in ACER database. The survey was validated by various reviews, pilot testing at 1 institution, and psychometric testing.

Time to complete the survey was 15 minutes. Each institution was given \$200 for a prize draw for one participant as an incentive.

Participants had the choice of completing a paper or on-line survey. Those who completed the paper version completed all sections of the survey whereas those completing the online survey left more items out.

Participants were sent 3 emails and 1 mail out. Institutions kept a record of mail returns and email bouncebacks.

A valid response was defined as one in which data was supplied for at least 25 items.

Data were weighted within each institution by sex and broad field of education. Response rates differed according to these 2 factors.

### Sample

39 institutions participated and were grouped as follows:

- Go8: Group of Eight ( $n = 8$ )
- ATN: Australian Technology Network of Universities ( $n = 5$ )
- IRU: Innovative Research Universities of Australia ( $n = 6$ )
- Regional: Regional Universities ( $n = 8$ )
- Metropolitan: Metropolitan Universities ( $n = 12$ )

(1 institution subsequently elected not to participate)

Students were assigned to 1 of 10 broad fields of education.

- Population for the survey = 98,535 bachelor degree graduates (made up of 86,303 pass degree graduates, 8,221 honours graduates, and 4,011 graduate entry degree graduates).
- Target population for survey = 76,346 (because 22,189 graduates were excluded from the total population<sup>\*</sup>).
- Target response rate was 15%.
- Achieved sample = 9,238 usable responses.
- Response rate = 12.1% (response rates at different institutions varied from 3.6% to 63.4%).

<sup>\*</sup> Participants who were not contactable prior to the survey (7.8%) or the survey was undeliverable (11.8%) were excluded from the target sample along with others the university had no record of (2.7%) ( $n = 21,868$  [22.27%]). Despite exclusions, sample size was still determined to be sufficient.

Representativeness of the sample (in terms of sex, residential location, field of education, labour force status) was determined by comparing respondents with statistics from the Australian Bureau of Statistics 2006 Census and data from the Department of Education, Employment, and Workplace Relations.

### Highlighted findings

Respondents were generally satisfied with learning outcome for their study and the quality of their degree. There were some differences as a function of field of education.

Respondents indicated that if they were to redo their degree, they would choose the same university but not necessarily the same degree. There were some differences as a function of field of education as well as the type of institution.

There was a general increase in how relevant and useful respondents perceived their degree to be with time.

In the 5 years since completing their Bachelor's degree, several participants went on to do further study.

At the 5-year timepoint (2008), 75% of respondents were in full-time employment, 16% were in part-time employment, and 9% were unemployed. Those in employment rose from 84% one year



post completion to 91% 5 years post completion. At the 5-year timepoint, 84% of males were in full-time work compared with 69% of females (7% due to child-rearing, domestic roles). The occupation destination of graduates changed over the 5 years post completion. Male graduates earned more despite taking other factors into account (e.g., age, work status, occupation type, enrolment in study, field of education, industry of occupation).

Respondents were generally satisfied with their work, and this satisfaction increased from year 1 to year 5 post completion.

In some fields of education, respondents initially worked overseas and then returned to work in Australia by 5 years post completion.

#### Limitations

Did not include international students.

#### Reference

Coates, H., & Edwards, D. (2009). *The 2008 Graduate Pathways Survey: Graduates' education and employment outcomes five years after completion of a bachelor degree at an Australian university*. Australian Council for Educational Research (ACER).

### **Australian Graduate Survey (AGS)**

Graduate Careers Australia (GCA), Australia

#### Aim

National census of new graduates to determine graduate destination (employment, further study, etc.) and course experience.

#### Methodology

Administered annually (to new cohorts) since 1972. Census-style surveys administered to all new graduates from all Australian universities about 4 months post-graduation. No follow-ups.

Administered online, hard-copy, or via telephone.

AGS comprises:

- Graduate Destination Survey (GDS), AND
- Course Experience Questionnaire (CEQ, added 1992), OR
- Postgraduate Research Experience Questionnaire (PREQ, added 1999)

#### Sample

<b>Cohort</b>	<b>Achieved sample</b>	<b>Response rate</b>
1999	unavailable	Annual response rate = 60-65%
2000	unavailable	
2001	unavailable	
2002	unavailable	
2003	unavailable	
2004	unavailable	
2005	unavailable	
2006	64,284	
2007	unavailable	
2008	96,538	
2009	97,304	
2010	99,691	

#### References

Summary documents obtained from website. Full reports only available for last two cohorts (2009 & 2010).

<http://www.graduatecareers.com.au/Research/Surveys/AustralianGraduateSurvey/index.htm>

## Beyond Graduation Survey (BGS)

Graduate Careers Australia (GCA), Australia

### Aim

To determine outcomes and experiences of graduates from Australian higher education institutions 3 years after completion. Primary focus is main activity at the time of the survey but also collects information about other activities since graduation and respondents' satisfaction with their university experience.

### Methodology

Resurveys respondents from AGS (see previous page) 3 years post-graduation. GCA planning to conduct further survey of graduates 5 years after graduation.

Survey assesses:

- Employment outcomes for last 3 years
- Further study
- Other activities
- Salaries
- Course experience reflections

### Sample

Samples were generally representative of all graduating students in terms of sex, age, and field of education.

	Cohort	
	2006	2007
<b>Baseline: 2006 AGS cohort</b>		
Administered	2006	2007
Target sample	unavailable	unavailable
Achieved sample	64,284	unavailable
Response rate	~60-65%	~60-65%
<b>3-year follow-up</b>		
Administered	2009	2010
Target sample	unavailable	unavailable
Achieved sample	5,818	10,111
Response rate	19.0%	unavailable

### References

Graduate Careers Australia (2010). *Beyond graduation 2009: The report of the Beyond Graduation Survey*. Melbourne, Australia: Graduate Careers Australia Ltd.

Graduate Careers Australia (2011). *Beyond graduation 2010: The report of the Beyond Graduation Survey*. Melbourne, Australia: Graduate Careers Australia Ltd.

<http://www.graduatecareers.com.au/Research/Surveys/BeyondGraduationSurvey/index.htm>

### Longitudinal Surveys of Australian Youth (LSAY)

National Centre for Vocational Education Research (NCVER) & Australian National University's Social Policy Evaluation, Analysis and Research Centre (SPEAR), Australia

#### Aim

Tracks students as they move from school into further study, work, and other destinations. There have been 5 cohorts so far (2 complete).

#### Methodology

Followed-up annually for 11 years (overall attrition rate = 8-10% per year). There are 12 waves (carried out annually) for each cohort.

In the first wave of the survey, respondents are given reading and numeracy tests to gauge school achievement (for later cohorts, scientific literacy also included). Respondents also complete a questionnaire regarding their plans for further education and work

Surveys in subsequent waves assess student achievement, student aspirations, school retention, social background, attitudes to school, work experiences and what students are doing when they leave school (vocational and higher education, employment, job seeking activity, and satisfaction with various aspects of their lives).

Interviews carried out using CATI – initially survey was paper-based but moved to CATI from 1997 onwards after high drop-out rate was observed.

#### Sample

Wave	Cohort				
	1995	1998	2003	2006	2009
<b>Wave 1</b>					
Administered	1995	1998	2003	2006	2009
Target sample	unavailable	unavailable	unavailable	unavailable	
Achieved sample	13,613	14,117	10,370	14,170	unavailable
Response rate	unavailable	unavailable	unavailable	unavailable	
Av. age	14.5 years	14.5 years	15.7 years	15.7 years	
<b>Current wave</b>					
Wave no.			8	5	
Administered			2010	2010	
Target sample	N/A	N/A	unavailable	unavailable	unavailable
Achieved sample			4,903	6,316	
Response rate*			47.3%	44.6%	
Av. age			22.7 years	19.7 years	
<b>Wave 12 – final wave</b>					
Administered	2006	2009	2014	2017	2020
Target sample	unavailable	unavailable			
Achieved sample	3,914	3,596			
Response rate*	28.8%	25.5%			
Av. age	25.4 years	25.5 years			

\* Response rates are expressed as a proportion of wave 1 sample.

Respondents are from a nationally-representative sample at each point in time. Sampling is stratified according to school sector (proportional) and students from small states are oversampled.

First two cohorts begin with year 9 students, subsequent cohorts enter the study at age 15.

#### Highlighted findings

School-to-work transition of Year 9 class of 1995 to 2005 (aged 24 years): Those who attended university had highest earnings. Bachelor degree increased earnings by ~30%. But there were only data 2 years post-graduation and sample size not large enough for analysis of differences by field of study or institution.

#### Strengths

Respondents who missed a survey wave were excluded from further waves.

#### Limitations

The data only extended to 2 years post-university education.

#### References

Summary documents obtained from website. <http://www.lsay.edu.au/index.html>

## United Kingdom

### Destination of Leavers from Higher Education (DLHE) Longitudinal survey

Higher Education Statistics Agency (HESA), UK

#### Aim

To determine graduates' activities 3 years after graduation.

#### Methodology

Two-stage approach:

1. Early survey – annual census-style survey administered to all UK graduates of higher education courses 6 months after graduation. *Note:* DLHE census survey is administered annually to all new UK graduates (excludes graduates not living in the EU).
2. Longitudinal survey – follow-up assessment 3 years after census survey (3.5 years post-completion) of students who did the Early Survey. The subsample is selected from the initial census sample. There is oversampling of certain groups of specific interest (e.g., postgraduates, ethnic minorities, Scottish/Welsh/Northern Irish graduates) hence the sample is not proportionally representative of the student population.

The Early (census) Survey methods and questions are standardized across all institutions.

Pilot testing of the longitudinal survey indicated no incentives should be provided and response rate should be 40% of the sample; thus target response rate to longitudinal survey set at 40%. Note that in order to be included in the sample, there must be at least one of email, physical address, or phone number.

For each cohort, data collection followed this basic sequence (there is some variation for different cohorts):

1. Participants are emailed a link to the survey and receive a reminder shortly after.
2. Non-responders and those without email addresses are posted a paper copy of the survey and are posted a reminder later.
3. Telephone interviews with remainder and non-responders – usually, up to 7 phone calls made.

The Longitudinal Survey questionnaire covers the following topics:

- Current main activity
- Current employment
- Course details
- Other qualifications obtained
- Details of all activities since completion (certain subsamples only)
- Satisfaction with course and career to date
- Additional questions for those who completed research degrees (2004/05 and 2006/07 cohorts)

### Sample

	Cohort		
	2002/03 graduates	2004/05 graduates	2006/07 graduates
<b>Early Survey (census): 6 months post-graduation</b>			
Administered	2002/03	2004/05	2006/07
Target sample (total graduates)	412,580	430,290	453,880
Achieved sample	307,650	319,260	332,110
Response rate	75%	74%	73.2%
<b>Longitudinal survey: 3.5 years post-graduation</b>			
Administered	2006/07	2008/09	2010/11
Target sample	55,900	160,995	224,590
Achieved sample	24,825	41,395	49,065
Response rate	44.41%	25.71%	21.8%
Notes		Over-sampling of foundation degree leavers, masters/ doctoral leavers, non-white leavers	Over-sampling of minority ethnic groups, masters/ doctoral leavers, Scottish/ Welsh/ Northern Irish graduates

*Note:* For each cohort, the Longitudinal Survey target sample is set at 60,000-70,000 graduates. For the 2004/05 and 2006/07 cohorts, after the initial sample of 60/70k had been selected, additional graduates for whom an email address was available were included in the target sample.

### Highlighted Findings

#### 2002/03 cohort at 2006/07 Longitudinal Survey:

- 74% of respondents were in full-time employment, 6% were in part-time employment, and 2% were unemployed.
- 14% were enrolled in further study and 32% had gained another qualification since the early survey.
- Males were more likely than females to be in full-time work and vice versa for part-time work.
- Most respondents indicated that they would not have changed their study or institution if they were to do it again.
- 37% were 'very satisfied' and 48% were 'fairly satisfied' with their career.

#### 2004/05 cohort at 2008/09 Longitudinal Survey:

- 76.1% of respondents were in full-time employment, 6.1% were in part-time employment, and 2.6% were unemployed.
- 12.4% were enrolled in further study and 38.2% had gained another qualification since the early survey.
- Males were more likely than females to be in full-time work and vice versa for part-time work.
- Course satisfaction varied according to course level and subject.
- 39.3% were 'very satisfied' and 47.6% were 'fairly satisfied' with their career.

#### 2006/07 cohort at 2010/11 Longitudinal Survey:

- 80.8% of respondents were in employed either full-time or part-time and 3.6% were unemployed.
- 12.1% were enrolled in further study and 37.1% had gained another qualification since the early survey.
- Males were more likely than females to be in full-time work and vice versa for unemployment.
- Males earned more than females but also tended to be employed in higher-paying jobs.
- In general, respondents indicated that it was not very likely they would change their course if they had the opportunity.
- 36.8% were 'very satisfied' and 47.4% were 'fairly satisfied' with their career.
- Most respondents indicated their study had prepared them 'very well' or 'quite well' for their career.

#### Limitations

The Longitudinal Survey sample is not representative as certain groups are oversampled and once the target population was defined, any additional graduates for whom an email address was available were included in the target sample.

The samples did not include international students.

The Longitudinal Survey does not seem to be a replication of the Early Survey – there is no baseline.

#### References

National Centre for Social Research (2007). *Destinations of leavers from higher education institutions longitudinal survey of the 2002/03 cohort: Key findings report*. Cheltenham, UK: Higher Education Statistics Agency Ltd.

Higher Education Statistics Agency (2009). *Destinations of leavers from higher education institutions longitudinal survey of the 2004/05 cohort: Key findings report*. Cheltenham, UK: Higher Education Statistics Agency Ltd.

Higher Education Statistics Agency (2011). *Destinations of leavers from higher education institutions longitudinal survey 2006/07*. Data available online from:

[http://www.hesa.ac.uk/component/option,com\\_pubs/Itemid,276/task,show\\_year/pubId,1714/versionId,54/yearId,262/](http://www.hesa.ac.uk/component/option,com_pubs/Itemid,276/task,show_year/pubId,1714/versionId,54/yearId,262/)



## Futuretrack

Higher Education Careers Services Unit (HECSU), UK

### Aim

Project began in 2006 and tracks a cohort of individuals for 5 years as they leave school and enter higher education (or not). General goal of determining relations between higher education, career decision-making, and the labour market. Specific aims to see how SES and education affect career choices and outcomes.

### Methodology

At stage 1, all applicants to full-time higher education courses (277 higher education institutions) in the UK (including EU and international applicants) were invited to take part (census-style survey). Survey data were merged with application data from the central application agency, the Universities and Colleges Admission Service (UCAS).

Participants fill out online questionnaires at each stage.

Stage 1: Choices, funding and expectations: applying to higher education – looks at experience of applying for higher education courses and the choices made.

Stage 2: Plans, aspirations and realities: the experience of students in their first year of higher education. – students' experiences at the end of their first year of study. There were 4 mailings to participants (initial, 1 month later, 2 months later, 3 months later).

Stage 3: How higher education courses and study contexts impacted on students' assessments, evaluations and predictions of educational outcomes – most will have completed study at this stage.

Stage 4: 'Futuretrackers' in employment.

They are also tracking a longitudinal pilot sample of 2005 applicants 1 year ahead at each stage.

### Sample

	Cohort			
	Stage 1	Stage 2	Stage 3	Stage 4
Administered	2006	2007	2009 & 2010	2011 & 2012
Target sample	427,786	126,978		
Achieved sample	128,260	49,555		
Response rate	29.98%	39.03%		
Notes	Sample includes 7,591 respondents who did not initially participate and who had not been accepted into courses – they were invited to complete a shorter online survey later.	Target sample comprised of the 99% of Stage 1 respondents who agreed to be contacted again. Included in the stage 2 sample were 5,497 new respondents.	Unavailable (only series of working papers describing results but not sample).	unavailable

### Strengths

Includes students who were not accepted into higher education courses.

### Limitations

Included only students applying for full-time higher education courses (note that there is another study currently underway tracking part-time students only).

Included new respondents in subsequent stages – no baseline data. Also, some respondents at stage 1 filled out a 'short' questionnaire.

### References

Purcell, K., et al. (2008). Applying for higher education – the diversity of career choices, plans and expectations. *Findings from the first Futuretrack survey of the 'Class of 2006' applicants for higher education*. UK: Warwick Institute for Employment Research.

Purcell, K., et al. (2009). Plans, aspirations and realities: taking stock of higher education and career choices one year on. *Findings from the Second Futuretrack survey of 2006 applicants for UK higher education*. UK: Warwick Institute for Employment Research.

Purcell, K., et al. (2009). Analysing the relationship between higher education participation and educational career development patterns and outcomes: A new classification of higher education institutions. *Working Paper 1*. UK: Warwick Institute for Employment Research

<http://www.hecsu.ac.uk/futuretrack.htm>

### **Moving On and Seven Years On, Class of '99**

Department for Education and Skills (DfES), Employment Studies Research Unit (ESRU), & Warwick Institute for Employment Research (IER), UK

#### Aim

Study designed to track graduates from graduation until 4 years later to determine how higher education affects early career development. This study has now been replaced by the Futuretrack study.

#### Methodology

Participants completed postal questionnaires and there were also follow-up qualitative interviews with ~300 (across all cohorts) participants from selected sub-samples, specifically, graduates who had trouble finding employment.

Surveys assessed:

- Qualifications obtained + further education and training since graduation.
- Employment (including complete work history since graduation, occupation, employment sector, earnings, evaluation of career to date), use of skills and qualifications in jobs, satisfaction with jobs and careers to date.
- Demographic data, e.g., gender, age, social class, religious and national identity, geographic mobility, debt while studying (+ impact on career).
- Values, aspirations, and perceptions of the graduate labour market.

Questionnaire comprised 16 pages of questions.

Qualitative interviews assessed:

- Career options that were chosen or rejected
- Obstacles encountered
- Details of why careers had developed in the way that they had
- Detailed information about what respondents' job tasks.

The researchers have looked at various subsamples including those who trained as teachers and Northern Ireland residents.

#### Sample

Sample selected to be representative of UK graduates (of undergraduate degrees) from a sample of UK higher education institutions (HEIs). A 5% sample of domestic graduates was drawn in a 2-stage process:

- 1) 33 HEIs were randomly drawn from all HEIs in the UK.\*
- 2) 1 in 2 students were sampled from each HEI.

\* Note that for the Seven Years On survey, an additional 1 in 3 participants from 5 more HEIs (38 HEIs in total) were included. For the Class of '99 survey, 1 in 2 respondents were drawn from the same 38 institutions as the Seven Years On survey.

There were 2 cohorts of participants:

- 1995 cohort completed an undergraduate degree or diploma in 1995 and were surveyed 3.5-4 years after graduation (Moving On survey) and re-surveyed 7 years after graduation (Seven Years On survey)
- 1999 cohort (referred to as Class of '99) completed an undergraduate degree or diploma in 1999 and were surveyed 4 years after graduation.

	1995 cohort		1999 cohort
	Moving On	Seven Years On	Class of '99
Administered	1998/99	2002/03	2003
Target sample	unavailable	unavailable	unavailable
Achieved sample	~9,600	4,502	9,236
Response rate	unavailable	30%	24%
Notes	Respondents mailed twice.	~3,300 respondents had completed the Moving On survey (70% had provided contact details so that they could be re-contact for the follow up) and ~1,200 were new participants. Follow-up programme of qualitative interviews (via telephone) with 200 participants.	Sample selected to be comparable to 1995 cohort. Sent postal questionnaire similar to one sent to 'Moving on' cohort. Follow-up programme of qualitative interviews (via telephone) with 100 participants.

### Highlighted findings

Class of '99: Career progression is slow and benefits of university education only become apparent a few years post completion.

### Strengths

For the Class of '99 survey, a questionnaire pilot was carried out before survey was administered to sample.

For the Class of '99 survey, additional institutions were invited to participate as there was an imbalance in institution representation in Moving on cohort.

### Limitations

For the 1995 cohort Moving On survey, international students and some types of institutions (e.g., medical schools, art and design colleges, the Open University) were excluded from the sample.

For the Class of '99 survey, international students and part-time students were excluded.

For the Class of '99 survey, although aimed to obtain representative sample, the sample did differ from the population in terms of subject of study – due to selection of higher education institutions or misclassifications. Also, females overrepresented, older mature students overrepresented, ethnic minorities underrepresented.

For the Class of '99 survey, there was a low response rate because institutions sent mail-outs and would not record who had received mail-out so could not send a second mail-out. Also, institutions held addresses that were out of date.

### References

Purcell, K., & Elias, P. (2004). Higher education and gendered career development – Research paper no. 4. Warwick: Employment Studies Research Unit & Warwick Institute for Employment Research.

Purcell, K., Elias, P., Davies, R., & Wilton, N. (2005a). *The Class of '99: A study of the early labour market experiences of recent graduates*. Warwick: Department for Education and Skills, University of Warwick. DfES Research Report No. 691.

Purcell, K., Elias, P., Davies, R., & Wilton, N. (2005b). *Northern Ireland's graduates: the classes of '95 and '99*. Belfast: Department for Employment and Learning (Northern Ireland).

Elias, P., McKnight, A., Pitcher, J., Purcell, K., & Simm, C. (1999). *Moving On: graduate careers three years after graduation*. Manchester: CSU/DfEE. ISBN: 1-84016-069-1

Elias, P., McKnight, A., Pitcher, J., Purcell, K., & Simm, C. (1999). *Moving On: Graduate Careers Three Years After Graduation – Short Report*. Manchester: CSU.

## Europe

### **REFLEX (Research into Employment and professional FLEXibility) project**

European Union

#### Aim

This is an international project that has been carried out in 16 countries. It focuses on the demands placed on higher education graduates and how higher education enables graduates to meet these demands.

#### Methodology

The project consists of 3 studies:

- 1) A study of each participating country's structural and institutional factors and their impact on higher education and work
- 2) A qualitative study on graduate competence
- 3) A survey of higher education graduates in each country**

The survey assessed graduates' experiences in higher education, work, and other areas of life (general demographic information, e.g., where live, time spent abroad, parents' education, etc.).

The graduates were surveyed once 5 years post-graduation (2005).

Postal questionnaire.

#### Sample

A representative sample of higher education graduates in 1999/2000 in 16 countries was drawn.

Countries included: Austria, Belgium-Flanders, Czech Republic, Estonia, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK

The sample was recruited as follows:

- Random selection of institutions to be sampled within each country
- Random selection of graduates (only those who were graduating and not continuing further study) from each institution.

Achieved sample = 35,968\*

Response rate = 33%\*

Total number of students invited not known.

\* Based on data from 13 countries (data from remaining countries not available when report was written).

The number of respondents differed between countries so analyses were weighted to 2,000 cases for each country.

#### Strengths

The sample included international students, part-time students, students who moved countries after graduation, and distance students.

## References

Allen, J., & van der Velden, R. (2008). *The Flexible Professional in the Knowledge Society: General results of the REFLEX project*. Maastricht: Research Centre for Education and the Labour Market.

Little, B. (2008). Graduate development in European employment: issues and contradictions. *Education and Training*, 50(5), 379-390.

## **Careers after Higher Education – a European Research Survey (CHEERS)**

International Centre for Higher Education Research (INCHER-Kassel), Germany

### Aim

To carry out a major comparative study on employment of higher education graduates. This study has since been replaced by the REFLEX project.

### Methodology

No longitudinal component – graduates from 12 countries (Austria, Finland, France, Germany, Italy, Norway, Spain, the Netherlands, UK, Czech Republic, Sweden, Japan) who completed qualifications in 1994/1995 were surveyed 4 years post-graduation (1998-2000).

Sample inclusion criteria:

- At least 3-year study programme
- Only first degrees

Postal questionnaire (supplemented by interviews with some graduates and employers).

The questionnaire was 16 pages with 80 questions and 600 variables and took more than 1 hour to complete. The questionnaire was highly standardised with few open questions.

There were 3 contact attempts via mail: 1) Questionnaire, 2) Reminder, 3) Reminder + Questionnaire.

Survey addressed:

- Socio-biographic profile of graduates
- Study experiences and competencies acquired
- Employment, work and careers since graduation
- Perceived links between education and work.

### Sample

Aimed to be representative of graduates.

Target sample = ~100,000

Achieved sample = 36,693

Response rate = ~40% (return rates from each country ranged from 15% to 50%, about 3,000-3,500 respondents per country)

### Highlighted results

There were differences between countries in Europe with respect to careers advice and employment of graduates.



## References

Teichler, U. (2007a). Does Higher Education Matter? Lessons from a Comparative Graduate Survey. *European Journal of Education*, 42(1), 11.

Teichler, U. (2007b). Graduate employment and work: Various issues in a comparative perspective. In U Teichler (ed.), *Careers of university graduates: Views and experiences in comparative perspectives* (pp. 1-14). Dordrecht: Springer.

Schomburg, H., & Teichler, U. (2006). *Higher education and graduate employment in Europe: Results of graduates surveys from 12 countries*. Dordrecht: Springer.

<http://www.uni-kassel.de/incher/cheers/index.ghk>

## Canada

### National Graduates Survey (NGS)

Statistics Canada, Canada

#### Aim

To determine the labour market outcomes of Canadian university and college graduates 2 and 5 years post-graduation.

#### Methodology

Cross-sectional design with longitudinal follow-up. Graduates are interviewed at two different times: at two years (National Graduates Survey – NGS) and five years (Follow-up Survey of Graduates – FOG) after graduating from postsecondary institutions (public universities, colleges, and trade schools) in Canada. Graduates from private institutions not included.

Surveys examine:

- Employment since graduation
- Relation between study programme and employment
- Job and career satisfaction
- Rates of under-employment and unemployment
- Type of employment obtained related to career expectations and qualification requirements
- Influence of postsecondary education on occupational achievement

Computer-assisted telephone interviews.

#### Sample

Sample aims to be representative – used stratified simple random sample design. Three variables were used for stratification:

- Geographical location of study institution (13 locations)
- Level of degree/study (5 levels)
- Field of study (12 fields)

Total of 780 possible strata but only 506 strata used as there were not graduates in each possible strata.

6 Cohorts so far:

	Cohort					
	1982	1986	1990	1995*	2000*	2005*
<b>National Graduates Survey: 2 years post-graduation</b>						
Administered	1984	1988	1992	1997	2002	2007
Target sample	36,424	40,657	36,879	61,759	61,558	unavailable
Achieved sample	27,022	31,677	28,143	unavailable	38,483	unavailable
Response rate	74.19%	77.91%	76.31%	79.6%	62.52%	~68%
Notes	Target sample was 22.5% of total population of 161,854	Target sample was 18.2% of total population of 223,445	Target sample was 19.1% of total population of 193,565		Target sample was 23% of total population of 267,400	Target sample was unknown % of total population of 305,000
<b>Follow-up Survey of Graduates-FOG: 5 years post-graduation</b>						
Administered	1987	1991	1995	2000	2005	2010
Target sample	26,106	30,799	27,511	40,054	unavailable	
Achieved sample	23,619	27,577	23,920	29,100	34,304	
Response rate	90.47%	89.54%	86.95%	72.65%	68.5%	unavailable
Notes						

\* Target samples included additional graduates requested by institutions to increase base sample (in 1995 cohort this number was 4,199).

### Strengths

Analyses limited to those who completed surveys at both time points. Only graduates who complete first survey are traced for second survey.

Survey tested with focus groups first.

### Limitations

No baseline.

Only included those residing in Canada (for 1982, 1986, 1990 cohorts) or Canada and the US (remaining cohorts).

Excludes older graduates.

### References

Finnie, R. (2000). From school to work: The evolution of early labour market outcomes of Canadian postsecondary graduates. *Canadian Public Policy*, 26(2), 197-223.

Finnie, R. (2004). The school-to-work transition of Canadian post-secondary graduates: A dynamic analysis. *Journal of Higher Education Policy and Management*, 26(1), 35-58.

Allen, M., Harris, S., & Butlin, G. (2003). Finding their way: A profile of young Canadian graduates. *Education, skills and learning: Research papers*. Statistics Canada.

Allen, M., & Vaillancourt, C. (2004). Class of 2000: Profile of postsecondary graduates and student debt. *Education, skills and learning: Research papers*. Statistics Canada.

Bayard, J., & Greenlee, E. (2009). Graduating in Canada: Profile, labour market outcomes and student debt of the class of 2005. *Culture, tourism and the Centre for Education Statistics: Research papers*. Statistics Canada.

<http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=5012&lang=en&db=imdb&adm=8&dis=2>

## United States of America

### Baccalaureate and Beyond Longitudinal Study (B&B)

National Center for Education Statistics, USA

#### Aim

Survey of graduating students with bachelors' degrees. Designed to examine employment and further education outcomes for bachelor's degree recipients over 10 years.

There have been 3 cohorts so far: Those who completed degrees in 1993, 2000, and 2008. Only the 1993 cohort was tracked for 10 years. Summary below refers largely to the 1993 cohort as the subsequent cohorts focused on the outcome and experience of teaching graduates.

#### Methodology

Respondents were initially interviewed in 1993 as part of the National Postsecondary Student Aid Study (NPSAS), which uses a representative sample of students from all over the US to determine how students pay for higher education. There were 3 follow-up surveys in 1994, 1997, and 2003.

The follow-up surveys assessed many aspects of graduates' lives, including **education** (degrees sought/earned, field of study, schools attended, financial aid, attitudes about value of education), **employment** (employment status, occupation/industry, job characteristics, income, job satisfaction, time spent not working), **finances** (household income, educational debt, educational tax credits, loan forgiveness programs, savings, assets, debts), **background** (marital status, family composition, civic participation, disabilities). There were also some specific questions for teaching graduates.

Phone interview for 1993, 1994, and 1997 time points. Choice of online survey, phone interview, or in-person interview for 2003 survey.

Respondents were offered incentives to complete the surveys.

Time to complete 2003 interview was 35-37 minutes (including data transmission).

#### Sample

##### **1993 cohort**

Target population included all those who completed a bachelor's degree in 1993. Aimed to obtain a nationally representative cross-section of all students in postsecondary institutions in the US.

Sample selected using stratified systematic sampling at each participating institution. Strata were geographic location, institution type, and course type. There were also differential probabilities of selection at each level.

	Years survey administered			
	1993	1994	1997	2003
Target sample	~16,320	~12,480	~11,190	~10,440
Achieved sample	~11,810	~10,080	~10,093	~8,970
Response rate	72.37%	80.77%	90.20%	85.92%
Notes	Respondents who completed interviews at all 4 time points = ~8,100 (represents ~1.2 million bachelor's degree recipients, 0.675%)			

### Further cohorts

	Interview		
	Initial	First follow-up	Second follow-up
<b>2000 cohort</b>			
Administered	2000	2001	
Target sample	unavailable	unavailable	N/A
Achieved sample	~11,630	~10,030	
Response rate	unavailable	92%	
Notes	Survey assessed time to degree completion, further study and employment, activities of newly-qualified teachers.		
<b>2008 cohort</b>			
Administered	2008	2009	2012
Target sample	unavailable		
Achieved sample	~19,000		unavailable
Response rate	unavailable		
Notes	Specific focus on new teachers.		

### Limitations

1993 cohort: Non-respondents at 1 or more phase were included in later phases.

### References

Bradburn, E., et al. (2006). *Where are they now? A description of the 1992-93 bachelor's degree recipients 10 years later: Statistical analysis report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 2007-159.

Wine, J., et al. (2005). *1993/03 Baccalaureate and Beyond Longitudinal Study (B&B:93/03): Methodology report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 2006-166.

Choy, S., Bardburn, E., & Carroll, C. D. (2008). *Ten years after college: Comparing the employment experiences of 1992-93 bachelor's degree recipients with academic and career-oriented majors*. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Charleston, S., et al. (2003). *Baccalaureate and Beyond Longitudinal Study: 2000-01 (B&B:2000/01): Methodology report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 2003-156.

## Beginning Postsecondary Students (BPS)

National Center for Education Statistics, USA

### Aim

To collect information about students' education and employment in the 6 years since they first enrolled in postsecondary education.

### Methodology

Surveys cohorts of beginning students at the end of their first year, then 3 and 6 years after first starting in postsecondary education.

Students were initially interviewed as part of the National Postsecondary Student Aid Study (NPSAS), which uses a representative sample of students from all over the US to determine how students pay for higher education. A subset of these students were selected to participate in the BPS.

Surveys assess:

- Student demographic characteristics
- School and work experiences
- Persistence, transfer, and degree attainment

Survey length = 20 minutes.

Phone survey for earlier time points and option of online survey at later time points.

### Sample

	Cohort		
	1990	1996	2004
<b>End of first year survey (NPSAS)</b>			
Administered	1990	1996	2004
Target sample	unavailable	unavailable	unavailable
Achieved sample	11,700	12,410	23,090
Response rate	unavailable	unavailable	unavailable
<b>3 years after starting study</b>			
Administered	1992	1998	2006
Target sample	unavailable	unavailable	unavailable
Achieved sample	7,787	10,332	14,900
Response rate	unavailable	unavailable	~80%
<b>6 years after starting study</b>			
Administered	1994	2001	2009
Target sample	unavailable	unavailable	unavailable
Achieved sample	6,786	12,100	15,160
Response rate	87.2%	88.3%	82%

### Limitations

Non-respondents at 1 or more phase were included in later phases.

Response rates include partially-completed surveys.

## References

Cominole, M., et al. (2007). *2004/06 Beginning Postsecondary Students Longitudinal Study (BPS:04/06): Methodology report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 2008-184.

Pratt, D. et al. (1996). *Beginning postsecondary students longitudinal study second follow-up (BPS:90/94): Final technical report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 96-153.

Wine, J., et al. (2002). *Beginning Postsecondary Students Longitudinal Study: 1996-2001 (BPS:1996/2001) Methodology Report*. Washington, DC: U.S. Department of Education, National Centre for Education Statistics, NCES 2002-171.

Wine, J., Janson, N., & Wheelless, S. (2011). *2004/09 beginning postsecondary students longitudinal study (BPS:04/09) full-scale methodology report*. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, NCES 2012-246.

<http://nces.ed.gov/surveys/bps/index.asp>



## APPENDIX 2. GLSNZ SAMPLE COMPARISON WITH 2010 COMPLETIONS

Note that these comparisons are retrospective (2010 completions); final comparisons of the 2011 GLSNZ sample will be made against all 2011 completions once those data become available.

**Table A2.01. 2010 completions and final sample numbers by institution**

University	2010 completions		GLSNZ sample	
Auckland	10171	(27.9%)	2062	(23.6%)
AUT	3662	(10.0%)	906	(10.4%)
Canterbury	1822	(5.0%)	487	(5.6%)
Lincoln	639	(1.8%)	433	(5.0%)
Massey	6449	(17.7%)	1524	(17.5%)
Otago	5402	(14.8%)	1388	(15.9%)
VUW	5382	(14.8%)	1245	(14.3%)
Waikato	2945	(8.1%)	674	(7.7%)
Total	36472	(100%)	8719	(100%)

**Table A2.02. 2010 completions and final sample numbers by sex**

Sex	2010 completions		GLSNZ sample	
Male	14581	(40.0%)	3281	(37.6%)
Female	21891	(60.0%)	5438	(62.4%)
Total	36472	(100%)	8719	(100%)

**Table A2.03. 2010 completions and final sample numbers by ethnicity**

Ethnicity	2010 completions		GLSNZ sample	
New Zealand European	19877	(54.5%)	4647	(53.3%)
Māori	2364	(6.5%)	626	(7.2%)
Pasifika *	1027	(2.8%)	172	(2.0%)
Asian **	7567	(20.7%)	1315	(15.1%)
Other	5637	(15.5%)	1596	(18.3%)
Multiple			363	(4.2%)
Total	36472	(100%)	8719	(100%)

\* Because two of the universities could not provide ethnicity using the specific Pacific Islands ethnic groupings we requested, for the remaining universities we assigned those identified as Samoan, Cook Islands Māori, Tongan, or Niuean to the 'Pasifika' ethnic group.

\*\* Because two of the universities could not provide ethnicity using the specific Asian ethnic groupings we requested, for the remaining universities we assigned those identified as Chinese or Indian to the 'Asian' ethnic group.

**Table A2.04. 2010 completions and final sample numbers by age**

<b>Age band</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
15-19 years	415	(1.1%)	17	(0.2%)
20-24 years	19622	(53.8%)	4657	(53.4%)
25-29 years	6295	(17.3%)	1493	(17.1%)
30-34 years	2925	(8.0%)	756	(8.7%)
35-39 years	2140	(5.9%)	543	(6.2%)
40-44 years	1761	(4.8%)	415	(4.8%)
45-49 years	1509	(4.1%)	340	(3.9%)
50-54 years	986	(2.7%)	265	(3.0%)
55-59 years	550	(1.5%)	153	(1.8%)
60-64 years	168	(0.5%)	55	(0.6%)
65-69 years	65	(0.2%)	13	(0.1%)
70+ years	35	(0.1%)	12	(0.1%)
Unclear	1	(0.003%)		
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

**Table A2.05. 2010 completions and final sample numbers by study domain**

<b>Study domain</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Agriculture/Horticulture	215	(0.6%)	168	(1.9%)
Commerce/Business	8838	(24.2%)	1740	(20.0%)
Education	5010	(13.7%)	1070	(12.3%)
Health Sciences	3975	(10.9%)	858	(9.8%)
Humanities/Arts/Social Sciences	9341.5	(25.6%)	2202	(25.3%)
Law	1063	(2.9%)	155	(1.8%)
Sciences/Engineering	7992.5	(21.9%)	1768	(20.3%)
PhD	37	(0.1%)	416	(4.8%)
Unclear			342	(3.9%)
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

**Table A2.06. 2010 completions and final sample numbers by degree level**

<b>Degree level</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Undergraduate	21285	(58.4%)	5140	(59.0%)
Postgraduate	15187	(41.6%)	3579	(41.0%)
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

**Table A2.07. 2010 completions and final sample numbers by EFTS**

Total sample:

<b>EFTS</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Full-time	23470	(64.4%)	5497	(63.0%)
Part-time	13002	(35.6%)	3154	(36.2%)
Unclear			68	(0.8%)
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

Sample excluding non-criterion university:

<b>EFTS</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Full-time	19563	(65.2%)	4594	(63.8%)
Part-time	10460	(34.8%)	2533	(35.2%)
Unclear			68	(0.9%)
<b>Total</b>	<b>30023</b>	<b>(100%)</b>	<b>7195</b>	<b>(100%)</b>

**Table A2.08. 2010 completions and final sample numbers by mode of study**

<b>Mode of Study</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Extramural	4105	(11.3%)	977	(11.2%)
Intramural	32367	(88.7%)	7742	(88.8%)
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

**Table A2.09. 2010 completions and final sample numbers by student status**

<b>Student Status</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
Domestic	32303	(88.6%)	7715	(88.5%)
International	4169	(11.4%)	1004	(11.5%)
<b>Total</b>	<b>36472</b>	<b>(100%)</b>	<b>8719</b>	<b>(100%)</b>

**Table A2.10. 2010 completions and final sample numbers by PhD student status**

<b>PhD student status</b>	<b>2010 completions</b>		<b>GLSNZ sample</b>	
International PhDs	232	(0.6%)	212	(2.4%)
<b>Total</b>	<b>36472</b>		<b>8719</b>	

**APPENDIX 3. GLSNZ MEASUREMENT BOOK**



# Measurement Book

## Graduate Longitudinal Study New Zealand



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## Introduction

Each measure assessed in the Graduate Longitudinal Study is listed in this document. The official name of each measure is used as the heading for each section. Where measures do not have official names (e.g., collections of individual items, such as demographic variables), an arbitrary name has been assigned. See the Measurement Table in this document for an overview of all of the measures and time of assessment. The survey will be administered at 4 time points: **T0 = 2011**, **T1 = 2013**, **T2 = 2016**, **T3 = 2021**. For each measure, this document contains the following descriptive information:

**Appears as:** The name under which the measure appears in the survey and the section under which it falls.

**Variable names begin with:** The 2–5-letter abbreviation for the measure.

**Description:** A brief description of what the instrument measures.

**Scale construction:** Any subscales and the items that comprise each subscale.

**References:** References from which the measures have been taken or adapted along with descriptions of the original items and ways in which they have been adapted for inclusion in the GLSNZ survey.

**Waves, N. of items, N. of cases:** A table outlining each wave, the items that are administered at each wave, the total number of items administered, the number of respondents at each wave, and notes regarding which items are administered at each wave and whether there have been any subsequent additions/ changes to the items.

Wave	Items	N. of items	N. of cases	Notes
T0				
T1				
T2				
T3				

**Scoring:** An outline of how the items are scored, how final scores are calculated, formulae for creating scale scores (if applicable), minimum and maximum values, and descriptions of what the final scores mean.

**Recoding:** List of items requiring reverse coding before final scores can be calculated.

**Psychometrics:** Psychometric data, e.g., reliability alphas, acquiescence index, and ipsatizing

**Items appear in Codebook in section:** The heading under which the measure appears in the codebook along with the item range.

**Rewording of original scales:** Tables detailing how the wording of items have changed from the original sources along with reasons for adaptation (if applicable).

**Note:** Items are referred to using the 2–5-letter abbreviation, followed by the item number, underscore, and time point number (T0, T1, T2, T3). TX denotes that the item refers to all time points. Example: Item 17 of the Academic Beliefs measure would be denoted as: AB17\_TX.



## Measurement Book Authors

The Graduate Longitudinal Study New Zealand Measurement Book was developed by the following members of the GLSNZ team:

Ms Sarah Kafka  
Dr Mele Taumoepeau  
Dr Karen Tustin  
Ms Megan Gollop  
Dr Nicola Taylor  
Dr Jackie Hunter  
Dr Kaa-Sandra Chee  
Professor Gordon Harold  
Professor Richie Poulton

## Measurement Table

Name of Measure(s)	Assessment Period			
	T0 – 2011 Baseline	T1 – 2013 2 year follow-up	T2 – 2016 5 year follow-up	T3 – 2021 10 year follow-up
<b>SECTION 1: GENERAL AND BACKGROUND INFORMATION</b>				
General Demographics and University Details (GDUD)	✓	✓	✓	✓
<b>SECTION 2: YOUR UNIVERSITY EXPERIENCE</b>				
Satisfaction with University (SU)	✓	✓	✓	✓
Reflecting on Your University Experience (RUE)	✓	✓	✓	✓
Benefits of a University Education (BUE)	✓	✓	✓	✓
Academic Beliefs (AB)	✓	✓	✓	✓
Overall Impressions (OI)	✓	✓	✓	✓
<b>SECTION 3: ASPIRATIONS, GOALS AND VALUES</b>				
Future Plans and Career Aspirations (FPCA)	✓	✓	✓	✓
Goals, Aspirations and Values (GAV)	✓	✓	✓	✓
<b>SECTION 4: EARNINGS AND ASSETS</b>				
Earnings and Assets (EA)	✓	✓	✓	✓
<b>SECTION 5: HEALTH AND WELL-BEING</b>				
General Health (GH)	✓	✓	✓	✓
General Feelings (GF)	✓	✓	✓	✓
Multidimensional Scale of Perceived Social Support (MSPSS)	✓	✓	✓	✓
<b>SECTION 6: PERSONAL CHARACTERISTICS</b>				
Big Five Inventory (BFI)	✓	✓	✓	✓
<b>SECTION 7: COMMUNITY INVOLVEMENT</b>				
Local Community Involvement (LCI)	✓	✓	✓	✓
National/International Community Involvement (NCI)	✓	✓	✓	✓
<b>SECTION 8: SUCCESS FACTORS</b>				
Success Factors (FS)	✓	✓	✓	✓
<b>SECTION 9: GENERAL COMMENTS AND CONTACT DETAILS</b>				
General Comments (GC)	✓	✓	✓	✓

*Note:* ✓ = Assessed; ✓ = To be assessed.

## Academic Beliefs (AB)

**Appears as:** *Academic Beliefs* (under the wider heading *SECTION 2: YOUR UNIVERSITY EXPERIENCE*)

**Variable names begin with:** AB

**Description:** These questions examine the extent to which the participants' self-regard is based on their academic achievements. This questionnaire consists of items from three sources described below and assesses participants' levels of intellectual and academic engagement, academic self-esteem, and academic self-efficacy.

**Scale construction:**

Scale	Items
Academic engagement subscale (3 items)	AB1_TX, AB2_TX, AB3_TX
Academic self-esteem subscale (5 items)	AB4_TX, AB5_TX, AB6_TX, AB7_TX, AB8_TX
Academic self-efficacy subscale (5 items)	AB9_TX, AB10_TX, AB11_TX, AB12_TX, AB13_TX

**References:**

**Items AB1\_TX, AB2\_TX, AB3\_TX:** These items form the academic engagement subscale and were adapted from:

- Major, B., Spencer S., Schmader, T., Wolfe, C., & Crocker, J. (1998). Coping with negative stereotypes about intellectual performance: The role of psychological disengagement. *Personality and Social Psychological Bulletin*, 24, 34-50. (see p.43)

Three disengagement questions have been reworded to be more oriented towards academic achievement rather than general testing or intelligence, e.g., Original: I really don't care what tests say about my intelligence, GLSNZ: I really don't care what academic achievements say about my intellectual capacity.

**Items AB4\_TX, AB5\_TX, AB6\_TX, AB7\_TX, AB8\_TX:** These items form the academic self-esteem subscale and were taken as is from items 9, 35, 61, 87, 112 in:

- Marsh, H.W., & O'Neill, R. (1984). Self-descriptive questionnaire III: The construct validity of multidimensional self-concept ratings by late adolescents. *Journal of Educational Measurement*, 21, 153-174.

**Items AB9\_TX, AB10\_TX, AB11\_TX, AB12\_TX, AB13\_TX:** These items form the academic self-efficacy subscale and were adapted from:

- Muris, P. (2001). A brief questionnaire for measuring self-efficacy in youths. *Journal of Psychopathology and Behavioral Assessment*, 23, 145-149.

Items have been reworded to specifically reflect a university context, e.g., Original: How well can you get teachers to help you when you get stuck on schoolwork? GLSNZ: I can get my lecturer/tutorial help when I am stuck on academic tasks

#### Waves, N. of items, N. of cases:

Wave	Items	N. of items	N. of cases	Notes
T0	AB1_TX, AB2_TX, AB3_TX, AB4_TX, AB5_TX, AB6_TX, AB7_TX, AB8_TX, AB9_TX, AB10_TX, AB11_TX, AB12_TX, AB13_TX	13		All items administered.
T1				
T2				
T3				

#### Scoring:

**Items AB1\_TX, AB2\_TX, AB3\_TX:** Respondents indicate their answers on a 7-point Likert scale (Strongly disagree = 1, Disagree = 2, Disagree somewhat = 3, Neutral = 4, Agree somewhat = 5, Agree = 6, Strongly agree = 7).

**Items AB4\_TX, AB5\_TX, AB6\_TX, AB7\_TX, AB8\_TX:** Respondents indicate their answers on an 8-point Likert scale (Definitely false = 1, Definitely true = 8).

**Items AB9\_TX, AB10\_TX, AB11\_TX, AB12\_TX, AB13\_TX:** Respondents indicate their answers on a 5-point Likert scale (Not at all = 1, Very well = 5).

#### Means:

**Academic engagement:** Sum items AB1\_TX, AB2\_TX, AB3\_TX. Min score = 3, max score = 21. The higher the score, the higher the level of disengagement.

**Academic self-esteem:** Sum items AB4\_TX, AB5\_TX, AB6\_TX, AB7\_TX, AB8\_TX. Min score = 5, max score = 40. The higher the score, the higher the level of academic self-esteem.

**Academic self-efficacy:** Sum items AB9\_TX, AB10\_TX, AB11\_TX, AB12\_TX, AB13\_TX. Min score = 5, max score = 25. The higher the score, the higher the level of self-efficacy.

**Recoding:** Items AB1\_TX, AB2\_TX, AB3\_TX could be reverse coded in order to combine scores from all subscales to form a total score.

### Psychometrics:

**Items appear in Codebook in section:** Academic Beliefs, AB1\_TX – AB13\_TX

### Rewording of original scales:

Item	GLSNZ Survey Item	Major et al. (1998) Item
AB1_TX	I really don't care what academic achievements say about my intellectual capacity.	I really don't care what tests say about my intelligence.
AB2_TX	Academic achievement will not change my opinion of how intelligent I am.	No intelligence test will ever change my opinion of how intelligent I am.
AB3_TX	How I do academically has little relation to who I really am.	How I do intellectually has little relation to who I really am.
Item	GLSNZ Survey Item	Muris (2001) Item
AB9_TX	How well can you get lecturers/tutors to help you when you get stuck on academic tasks?	How well can you get teachers to help you when you get stuck on schoolwork?
AB10_TX	How well can you study when there are other interesting things to do?	How well can you study when there are other interesting things to do.
AB11_TX	How well can you study for academic tests and exams?	How well can you study a chapter for a test?
AB12_TX	How well can you succeed in passing all your university courses?	How well do you succeed in passing all subjects?
AB13_TX	How well do you succeed in satisfying your lecturers in academic tasks?	How well do you succeed in satisfying your parents with your schoolwork?

## Benefits of a University Education (BUE)

**Appears as:** *Benefits of a University Education* (under the wider heading *SECTION 2: YOUR UNIVERSITY EXPERIENCE*)

**Variable names begin with:** BUE

**Description:** This questionnaire was constructed to assess the ways in which respondents believe their university education will be of benefit to them in the future in a range of different domains (e.g., work/career, personal and social development, etc.). The questionnaire consists of items from a range of sources described below.

**Scale construction:** N/A

### References:

**Items BUE1\_TX, BUE2\_TX, BUE3\_TX, BUE9\_TX, BUE13\_TX:** Adapted from the 2005 REFLEX Master Questionnaire (REFLEX - short for Research into Employment and professional FLEXibility). The REFLEX Master Questionnaire is part of the larger REFLEX project which assesses the skills graduates need in order to function effectively in the workforce post-graduation, the part played by higher education institutes in equipping graduates with these skills, and the problems that occur as graduates, higher education institutes, employers and other relevant parties each work towards fulfilling their own objectives and the way in which these problems might be addressed. The REFLEX project, a European Commission initiative, is financed as a Specific Targeted Research Project (STREP) of the European Union's Sixth Framework Programme. The project involves partners from fifteen countries (Austria, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, and the UK plus Belgium-Flanders, Czech Republic, Portugal, Switzerland, Japan, and Estonia that have received funding from national sources). The REFLEX Master Questionnaire is a survey of higher education graduates from nine European countries, approximately five years after qualification completion. The sample is comprised of bachelors and masters (or equivalent) programme graduates who received their degree in the 1999/2000 academic year. Items BUE1\_TX, BUE2\_TX, BUE3\_TX, BUE9\_TX, and BUE10\_TX, which assess what the respondent thinks their study programme has been a good basis for, are adapted from section II of the REFLEX Master Questionnaire, which assesses evaluation of study programme.

- REFLEX (2005). REFLEX Master Questionnaire. *Specific Targeted Research Project (STREP) of the European Union's Sixth Framework Programme*. Retrieved February 22, 2011 from <http://www.fdewb.unimaas.nl/roa/reflex/>

**Items BUE4\_TX, BUE5\_TX, BUE6\_TX, BUE7\_TX, BUE10\_TX, BUE11\_TX, BUE12\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a series of questions examining what respondents' believe are the

benefits of a university education. The suggestions were submitted in a written report from Massey University to the GLSNZ team on 18 November 2010. The GLSNZ team constructed specific questions in response to each area of interest outlined by Massey University staff. The wording was adapted to be consistent with other items in the questionnaire. Response options were also constructed.

- Massey University (2010, November). Benefits of a University Education items. *Feedback on the Graduate Longitudinal Study Draft Questionnaire Booklet*.

**Item BUE8\_TX:** Developed by the GLSNZ team.

**Item BUE14\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Otago University staff suggested a question examining whether respondents believe that the benefits of a university education include the development of leadership skills. The suggestion was submitted verbally by Otago University staff in a meeting held by the GLSNZ team to garner feedback on the draft survey on 10 November 2010. The GLSNZ team constructed a specific question in response to the suggestion made by Otago University staff. The wording was adapted to be consistent with other items in the questionnaire. Response options were also constructed.

- The University of Otago (2010, November). Leadership Skills item. *Verbal Communication*.

**Item BUE15\_TX:** Following the Maori consultation process with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining whether respondents believe that the benefits of a university education include the development of a secure identity. The suggestion was submitted electronically by Massey University staff on 20 July 2011. The GLSNZ team constructed a specific question in response to the suggestion made by Massey University staff. The wording was adapted to be consistent with other items in the questionnaire. Response options were also constructed.

- Massey University (2011, July). Secure Identity item. *Email Communication*.

#### Waves, N. of items, N. of cases:

Wave	Items	N. of items	N. of cases	Notes
T0	BUE1_TX, BUE2_TX, BUE3_TX, BUE4_TX, BUE5_TX, BUE6_TX, BUE7_TX, BUE8_TX, BUE9_TX, BUE10_TX, BUE11_TX, BUE12_TX, BUE13_TX, BUE14_TX, BUE15_TX	15		All items administered.
T1				
T2				
T3				

**Scoring:** For each item, respondents indicate their answer on a 5-point Likert scale (Not at all = 1, To a very high degree = 5). Min score = 15, max score = 75. Compute the mean of all items. A high score indicates that respondents believe to a greater extent that their study programme will be/has been a good basis for a range of positive outcomes, both in terms of their career and in terms of their life in general.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** Benefits of University Education, BUE1\_TX – BUE15\_TX.

**Rewording of original scales:**

Item	GLSNZ Survey Item	REFLEX Master Questionnaire 2005 Item	Reason(s) for adapting item
BUE1_TX	Obtaining employment?	Starting work?	Changed to make the question consistent with others in the set/survey.
BUE2_TX	Performing work tasks?	Performing your current work tasks?	‘Current’ deleted because respondents are still at university at T0.
BUE3_TX	Your career?	Future career?	‘Future’ deleted to make the question consistent with others in the set.
BUE9_TX	Personal development?	Your personal development?	‘Your’ deleted to make the question consistent with others in the set.
BUE13_TX	Developing entrepreneurial skills?	Development of entrepreneurial skills?	Tense changed to make the question consistent with others in the set.



## Big Five Inventory (BFI)

**Appears as:** *Personal Characteristics* (under the wider heading *SECTION 6: PERSONAL CHARACTERISTICS*)

**Variable names begin with:** BFI

**Description:** These questions assess five dimensions of personality: Extraversion, agreeableness, conscientiousness, neuroticism, and openness.

**Scale construction:**

Sub-scale	Items
Extraversion (8 items)	BFI1_TX, BFI6_TX, BFI11_TX, BFI16_TX, BFI21_TX, BFI26_TX, BFI31_TX, BFI36_TX
Agreeableness (9 items)	BFI2_TX, BFI7_TX, BFI12_TX, BFI17_TX, BFI22_TX, BFI27_TX, BFI32_TX, BFI37_TX, BFI42_TX
Conscientiousness (9 items)	BFI3_TX, BFI8_TX, BFI13_TX, BFI18_TX, BFI23_TX, BFI28_TX, BFI33_TX, BFI38_TX, BFI43_TX
Neuroticism (8 items)	BFI4_TX, BFI9_TX, BFI14_TX, BFI19_TX, BFI24_TX, BFI29_TX, BFI34_TX, BFI39_TX
Openness (10 items)	BFI5_TX, BFI10_TX, BFI15_TX, BFI20_TX, BFI25_TX, BFI30_TX, BFI35_TX, BFI40_TX, BFI41_TX, BFI44_TX

**References:** Items were taken directly from:

- John, O. P., Donahue, E.M., & Kentle, R.L. (1991). *The Big Five Inventory – Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

See also:

- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big-Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	BFI1_TX, BFI2_TX, BFI3_TX, BFI4_TX, BFI5_TX, BFI6_TX, BFI7_TX, BFI8_TX, BFI9_TX, BFI10_TX, BFI11_TX, BFI12_TX, BFI13_TX, BFI14_TX, BFI15_TX, BFI16_TX, BFI17_TX, BFI18_TX, BFI19_TX, BFI20_TX, BFI21_TX, BFI22_TX, BFI23_TX, BFI24_TX, BFI25_TX, BFI26_TX, BFI27_TX, BFI28_TX, BFI29_TX, BFI30_TX, BFI31_TX, BFI32_TX, BFI33_TX, BFI34_TX, BFI35_TX, BFI36_TX, BFI37_TX, BFI38_TX, BFI39_TX, BFI40_TX, BFI41_TX, BFI42_TX, BFI43_TX, BFI44_TX	44		All items administered.
T1				
T2				
T3				

**Scoring:** Participants indicate their answers on a 5-point Likert scale (Disagree strongly = 1, Disagree a little = 2, Neither agree nor disagree = 3, Agree a little = 4, Agree strongly = 5). Min score = 44, max score = 220. Each personality dimension is coded as a subscale, by computing the *mean* of the items within each subscale (see Scale construction table above), after relevant items have been reverse coded (see Recoding below). Higher mean scores within each subscale indicate greater endorsement of those traits.

**Recoding:**

**Extraversion:** BFI6\_TX, BFI21\_TX, BFI31\_TX

**Agreeableness:** BFI2\_TX, BFI12\_TX, BFI27\_TX, BFI37\_TX

**Conscientiousness:** BFI8\_TX, BFI18\_TX, BFI23\_TX, BFI43\_TX

**Neuroticism:** BFI9\_TX, BFI24\_TX, BFI34\_TX

**Openness:** BFI35\_TX, BFI41\_TX

**Psychometrics:****Acquiescence Index and Ipsatizing (person-centered z scores) items:**

For computation instructions and SPSS syntax refer to Appendix 4.2 of:

- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big-Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.

**Reliability alphas:**

**Items appear in Codebook in section:** Big Five Inventory, BFI1\_TX – BFI44\_TX

**Rewording of original scales:** N/A

## Earnings and Assets (EA)

**Appears as:** *Earnings and Assets* (under the wider heading *SECTION 4: EARNINGS AND ASSETS*)

**Variable names begin with:** EA

**Description:** These questions examine participants' current financial situation in terms of their current employment, financial demographics (income, debt, assets, financial commitments) and economic strain (ability to afford accommodation, food, clothing, leisure activities, bills). This questionnaire consists of items from several sources described below.

**Scale construction:**

Scale	Items
Current employment (7 items)	EA1_TX, EA2_TX, EA3_TX, EA4_TX, EA5_TX, EA6_TX, EA7_TX
Financial demographics (5 items)	EA8_TX, EA9_TX, EA10_TX, EA11_TX, EA12_TX
Economic Strain Model (modified) (5 items)	EA13_TX, EA14_TX, EA15_TX, EA16_TX, EA17_TX

**References:**

**Items EA1\_TX, EA2\_TX, EA3\_TX:** Adapted from the University of Otago 2009 Graduate Opinion Survey. The survey has been conducted annually since 1998 and is targeted at individuals who have graduated in the preceding 18- to 24-month period. The survey is divided into five sections in total. Section A asks participants about their course details. Section B concerns graduates' perspectives on their learning while at Otago University using the Course Experience Questionnaire (CEQ). In Section C, individuals who completed postgraduate qualifications are asked to evaluate the quality of supervision and support they received as postgraduate students. Section D examines whether a range of skills were developed at University and the extent to which these skills have transferred to life beyond university. The final section, Section E, asks respondents to provide some basic demographic information. The results of this annual survey are used to for Departmental Reviews, the University's yearly Statement of Objectives, and its Annual Report. The items adapted for the GLSNZ's Earnings and Assets (EA) section are taken from the demographics section (Section E) of the University of Otago Graduate Opinion Survey. Items EA1\_TX, EA2\_TX, and EA3\_TX are adapted from question E10 of the Graduate Opinion Survey, which assesses respondents' current employment status. The response options for item EA1\_TX were extended to include a 'self-employed' option. In addition to providing their job title and employer details in item EA2\_TX, respondents were also asked to indicate the number of hours they work per week in item EA3\_TX.

- University of Otago (2009). *2009 Graduate Opinion Survey: Summary report, September 2009*. Dunedin, NZ: University of Otago.

**Items EA4\_TX, EA5\_TX:** Designed by the GLSNZ team to tap the primary tasks performed by respondents in their jobs and the qualifications needed (if any) to do the job.

**Item EA6\_TX:** Adapted from the Postgraduate Student Engagement Questionnaire (PSEQ). The PSEQ is a questionnaire in the Postgraduate Survey of Student Engagement (POSSE). The PSEQ is conducted as part of the Australian Council for Educational Research's (ACER) Australasian Survey of Student Engagement (AUSSE). The aim of the AUSSE is to assess students' engagement in university study to help institutions evaluate and improve the quality of education that students receive. The AUSSE was conducted for the first time in 2007, with 25 Australian and New Zealand universities taking part. In 2008, 29 institutions participated and in 2009, 35 institutions participated. The PSEQ is one of three surveys run by the AUSSE. The AUSSE also runs the Student Engagement Questionnaire (SEQ), which assesses first- and third-year undergraduate students' engagement and the Staff Student Engagement Questionnaire (SSEQ), which assesses staff perspectives on student engagement. The PSEQ is adapted from the SEQ to assess postgraduate students. It is completed online and takes around 15 minutes. The PSEQ was trialed in 2009 on a group of Australian universities and was offered to all institutions taking part in the AUSSE from 2010. The PSEQ contains six student engagement scales (Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning) and seven outcome measures (Higher-Order Thinking, General Learning Outcomes, General Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction). Data is also collected on individual demographics and educational contexts. Item EA6\_TX was adapted from a Career Readiness (outcome measure) item in the PSEQ assessing how much the respondent's work is related to their field of study.

- The Australian Council for Educational Research (ACER) (2010). *The Postgraduate Student Engagement Questionnaire (PSEQ) from the Postgraduate Survey of Student Engagement (POSSE): The Australasian Survey of Student Engagement (AUSSE)*. Retrieved February 18, 2011 from [http://ausse.acer.edu.au/images/docs/AUSSE\\_2010\\_POSSE.pdf](http://ausse.acer.edu.au/images/docs/AUSSE_2010_POSSE.pdf)

**Item EA7\_TX:** Designed by the GLSNZ team to tap to what extent respondents are using the skills gained from their studies to their current job.

**Item EA8\_TX:** Adapted from the Dunedin Multidisciplinary Health and Development Study (DMHDS) and the New Zealand Census of Population and Dwellings (2011). The New Zealand census is conducted every five years to assess the number and type of people and dwellings there are in New Zealand. The census is carried out to help with planning public services (e.g., education, health, housing, and transport). It is also used to keep track of societal change. Taken from the Individual Form of the New Zealand Census of Population and Dwellings (2011), item EA8\_TX corresponds to question 31 on the census form and assesses participants' income from all sources.

- Statistics New Zealand Census (2011). *New Zealand Census of Population and Dwellings, Individual Form*. Retrieved February 13, 2011 from <http://www.stats.govt.nz/census/2011-census/2011-census-forms-and-guidenotes.aspx>

**Items EA9\_TX, EA10\_TX, EA12\_TX:** Adapted from the Dunedin Multidisciplinary Health and Development Study (DMHDS).

**Item EA11\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Victoria University staff suggested a question examining whether respondents had regular religious and extended family financial commitments. The question was submitted via email by Victoria University staff on 28 March 2011.

- Victoria University of Wellington (2011, March). Financial commitments item. *Email*.

**Items EA13\_TX, EA14\_TX, EA15\_TX, EA16\_TX, EA17\_TX:** Adapted from the Iowa Youth and Family Project's 'Financial Strain Scale,' of which some items (items EA13\_TX, EA14\_TX, EA15\_TX, and EA16\_TX) were taken from Pearlin et al.'s (1981) 'Economic Strain Model.' Pearlin et al.'s Economic Strain Model was originally developed by Pearlin and Lieberman (1979). This scale and the other scales that Pearlin & Lieberman used in their longitudinal study are based on pilot interviews with 100 participants. These interviews were open-ended, unstructured discussions in which participants described some of the life strains that they faced and how they dealt with them. The authors developed the questions from thematic analysis of the pilot interviews; the final questions were identified after several pre-tests. In Pearlin & Lieberman (1979), the model was referred to as 'Economic, Persistent Problems.' The original scale contains nine items. NB: Item EA17\_TX was originally adapted from the Iowa Youth and Family Project's 'Can't Make Ends Meet Scale' but is actually part of Pearlin & Lieberman's (1979) and Pearlin et al.'s (1981) 'Economic Strain Model.' The response scales for all of the items was reversed to maintain consistency with other items in the GLSNZ survey. Specifically, the original response scale was changed from: 1 = Strongly agree, 2 = Agree, 3 = Neutral/mixed, 4 = Disagree, 5 = Strongly disagree, to 1 = Strongly disagree, 2 = Disagree, 3 = Neutral/mixed, 4 = Agree, 5 = Strongly agree.

- Iowa Youth and Family Project Codebook. Items BF105003, BF105004, BF105007, BF105009, BF105011.
- Pearlin, L. I., & Lieberman, M. A. (1979). Social sources of emotional distress. *Research in Community and Mental Health*, 1, 217-248.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 22, 337-356.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	EA1_TX, EA2_TX, EA3_TX, EA4_TX, EA5_TX, EA6_TX, EA7_TX, EA8_TX, EA9_TX, EA10_TX, EA11_TX, EA12_TX, EA13_TX, EA14_TX, EA15_TX, EA16_TX, EA17_TX	17		All items administered.
T1				
T2				
T3				

**Scoring:**

**Item EA1\_TX:** Respondents indicate whether or not they were currently employed (No, Yes – full-time, Yes – part-time, Yes – self-employed).

**Item EA2\_TX:** If employed, respondents indicate their job title and employer for their primary job.

**Item EA3\_TX:** If employed, respondents indicate total number of hours worked per week (in their primary job).

**Item EA4\_TX:** If employed, respondents indicate the main duties of their primary job (5 lines available).

**Item EA5\_TX:** If employed, respondents indicate the qualifications needed to do the job (5 lines available).

**Item EA6\_TX:** Respondents indicate on a 5-item scale (Not at all, Very little, Some, Quite a bit, Very much) how much their work is related to their field of study.

**Item EA7\_TX:** Respondents indicate on a 5-item scale (Not at all, Very little, Some, Quite a bit, Very much) how much they are able to apply skills gained from their studies to their current job.

**Item EA8\_TX:** Respondents indicate their current income on a 23-item scale (Loss; Zero income; NZ\$5,000 increments from NZ\$1 to NZ\$40,000; NZ\$10,000 increments from NZ\$40,001 to NZ\$150,000; NZ\$150,001+; Don't know).

**Item EA9\_TX:** Respondents indicate their approximate student loan debt on an 18-item scale (Didn't take out a student loan; Zero; NZ\$5,000 increments from NZ\$1 to NZ\$40,000; NZ\$10,000 increments from NZ\$40,001 to NZ\$100,000; NZ\$100,001+; Don't know).

**Item EA10\_TX:** Respondents indicate their approximate debt from all other sources on a 17-item scale (Zero; NZ\$5,000 increments from NZ\$1 to NZ\$40,000; NZ\$10,000 increments from NZ\$40,001 to NZ\$100,000; NZ\$100,001+; Don't know).

**Item EA11\_TX:** Respondents indicate whether they have any other significant regular financial commitments per annum. If so, respondents indicate the accompanying total annual amount on an 18-item scale (NZ\$5,000 increments from NZ\$1 to NZ\$40,000; NZ\$10,000 increments from NZ\$40,001 to NZ\$100,000; NZ\$100,001 – NZ\$250,000; NZ\$250,001 – NZ\$500,000; NZ\$500,001+; Don't know).

**Item EA12\_TX:** Respondents indicate the approximate total value of their assets on a 19-item scale (Zero; NZ\$5,000 increments from NZ\$1 to NZ\$40,000; NZ\$10,000 increments from NZ\$40,001 to NZ\$100,000; NZ\$100,001 – NZ\$250,000; NZ\$250,001 – NZ\$500,000; NZ\$500,001+; Don't know).

**Items EA13\_TX, EA14\_TX, EA15\_TX, EA16\_TX, EA17\_TX:** Respondents indicate their answers on 5-point Likert scales (Strongly disagree = 1, Disagree = 2, Neutral/mixed = 3, Agree = 4, Strongly Agree = 5). Sum all items. Min score = 5, max score = 25. A higher score indicates less economic/financial strain (after item EA17\_TX reverse coded).

**Recoding:** Item EA17\_TX

**Psychometrics:**

**Items appear in Codebook in section:** Earnings and Assets, EA1\_TX – EA17\_TX



**Rewording of original scales:**

<b>Item</b>	<b>GLSNZ Survey Item</b>		<b>PSEQ Item</b>	
EA6_TX	How much is this work related to your field of study?		If you are working for pay, how much is this work related to your field of study?	
<b>Item</b>	<b>GLSNZ Survey Item</b>	<b>NZ Census Item</b>	<b>DMHDS Item</b>	
EA8_TX	Please indicate your current income per annum (include loans, scholarships and benefits etc.)	From all the sources of income you marked in question 30, what will the total income be: <ul style="list-style-type: none"> <li>• that you yourself got</li> <li>• before tax or anything was taken out of it</li> <li>• in the 12 months that will end on 31 March 2011</li> </ul>	For your main job, how much do you earn per year before taxes are taken out?	
<b>Item</b>	<b>GLSNZ Survey Item</b>	<b>Pearlin &amp; Lieberman (1979) Item</b>	<b>Pearlin et al. (1981) Item</b>	<b>Iowa Youth &amp; Families Project Item</b>
EA13_TX	I have enough money to afford the accommodation I need.	At the present time are you able to afford: A home that is large enough and comfortable enough for (you/your family)?	At the present time: Are you able to afford a home suitable for (yourself/your family)?	I have enough money to afford the kind of home I would to have.
EA14_TX	I have enough money to afford the clothing I need.	How often does it happen that you don't have enough money to afford: The kind of clothing (you/your family) should have?	At the present time: Do you have enough money for the kind of clothing (you/your family) should have?	I have enough money to afford the kind of clothing I should have.
EA15_TX	I have enough money to afford the food I need.	How often does it happen that you don't have enough money to afford: The kind of food (you/your family) should have?	At the present time: Do you have enough money for the kind of food (you/your family) should have?	I have enough money to afford the kind of food I should have.

<b>Item</b>	<b>GLSNZ Survey Item</b>	<b>Pearlin &amp; Lieberman (1979) Item</b>	<b>Pearlin et al. (1981) Item</b>	<b>Iowa Youth &amp; Families Project Item</b>
EA16_TX	I have enough money to afford the leisure and recreational activities I want.	How often does it happen that you don't have enough money to afford: The kind of leisure activities that (you/your family) want(s)?	At the present time: Do you have enough money for the leisure activities (you/your family) want(s)?	I have enough money to afford the kind of leisure and recreational activities I want to participate in.
EA17_TX	Over the past 12 months I have had difficulty meeting my financial commitments.	How much difficulty do you have in meeting the monthly payments on (your/your family's) bills?	Do you have a great deal, some, a little, or no difficulty in paying your bills?	Think back over the past 12 months and tell us how much difficulty you had with paying your bills. Would you say you had... 1 = A great deal of difficulty, 2 = Quite a bit of difficulty, 3 = Some difficulty, 4 = A little difficulty, 5 = No difficulty at all

## Success Factors (FS)

**Appears as:** *Factors of Success* (under the wider heading *SECTION 8: SUCCESS FACTORS*)

**Variable names begin with:** FS

**Description:** These items were designed to measure barriers to success and to determine whether there were any factors that helped or hindered the successful completion of the respondent's qualification(s) and what those factors were.

**Scale construction:** N/A

**References:** Developed by the GLSNZ team in response to suggestions from Pacific Islands pilot participants (2011).

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	FS1_TX, FS2_TX	2		All items administered.
T1				
T2				
T3				

### Scoring:

**Item FS1\_TX:** Respondents indicated whether or not there were any factors that hindered the completion of their qualification and what those factors were.

**Item FS2\_TX:** Respondents indicated whether or not there were any factors that helped the completion of their qualification and what those factors were.

**Recoding:** N/A

**Psychometrics:**

**Items appear in Codebook in section:** Factors of Success, FS1\_TX – FS2\_TX

**Rewording of original scales:** N/A

## Future Plans and Career Aspirations (FPCA)

**Appears as:** *Future Plans and Career Aspirations* (under the wider heading *SECTION 3: ASPIRATIONS, GOALS AND VALUES*)

**Variable names begin with:** FPCA

**Description:** This questionnaire was constructed to assess respondents' future plans and career aspirations. Questions assess whether respondents intend to pursue a career, a job, or further study. Also assessed are respondents' plans for the next two years, the field they intend to seek employment in and what it is they are looking for in a career/job. Respondents are also asked what is most important to them in terms of choosing a career/job and the income they hope to earn. Finally, respondents are asked where they would like to be in 10 years time. The questionnaire consists of items from a range of sources described below.

**Scale construction:** N/A

### References:

**Items FPCA1\_TX, FPCA4\_TX, FPCA5\_TX, FPCA6\_TX:** These questions and response options were developed by the GLSNZ team from a set of basic questions (without response options) supplied by the New Zealand Ministry of Education and Ministry of Women's Affairs, each of whom contracted the GLSNZ to ask a series of questions. The Ministry of Education is specifically interested in determining whether international PhD graduates are entering the New Zealand labour market, following the introduction of the 'domestic fees for international PhDs' policy. The Ministry of Women's Affairs is interested in examining what differences there are, with regard to employment outcomes and career progression, for male and female graduates. Ultimately, the Ministry of Women's Affairs aim to determine the factors that contribute to income differences between male and female graduates soon after leaving university. The questions that each of the Ministries contributed overlapped considerably (the Ministry of Education contributed an additional question not put forward by the Ministry of Women's Affairs). The Ministry of Women's Affairs suggested a question asking what graduates are looking for in a career and whether they are looking for a career and a job. The Ministry of Education also suggested a question what graduates are looking for in a career. From these two suggestions, the GLSNZ team created two questions. Item FPCA1\_TX asks whether respondents intend to pursue a career or a job. The question was expanded to include examples and a third option (further study). A set of responses corresponding to the options outlined in the question was developed by the GLSNZ team. Item FPCA4\_TX asks what factors respondents are looking for in a career. A set of response options was developed by the GLSNZ team. Item FPCA5\_TX was requested by both ministries to tap 3 the most important factors among respondents' choices in the previous question (item FPCA4\_TX). Item FPCA6\_TX was requested by both ministries to determine where respondents would like to be in 5,

10 years time. The question was adapted so that it referred to one specific time point (10 years). It was considered too confusing to refer to two time points (which might yield very different responses) within one question. A set of response options was developed by the GLSNZ team.

- The New Zealand Ministry of Education (2010). *Contract for the provision of services in relation to a survey of international PhD graduates as part of the 2011 Graduate Longitudinal Study*.
- The New Zealand Ministry of Women's Affairs (2010). *Contract with the Graduate Longitudinal Study New Zealand*.

**Item FPCA2\_TX:** Adapted from the Postgraduate Student Engagement Questionnaire (PSEQ). The PSEQ is a questionnaire in the Postgraduate Survey of Student Engagement (POSSE). The PSEQ is conducted as part of the Australian Council for Educational Research's (ACER) Australasian Survey of Student Engagement (AUSSE). The aim of the AUSSE is to assess students' engagement in university study to help institutions evaluate and improve the quality of education that students receive. The AUSSE was conducted for the first time in 2007, with 25 Australian and New Zealand universities taking part. In 2008, 29 institutions participated and in 2009, 35 institutions participated. The PSEQ is one of three surveys run by the AUSSE. The AUSSE also runs the Student Engagement Questionnaire (SEQ), which assesses first- and third-year undergraduate students' engagement and the Staff Student Engagement Questionnaire (SSEQ), which assesses staff perspectives on student engagement. The PSEQ is adapted from the SEQ to assess postgraduate students. It is completed online and takes around 15 minutes. The PSEQ was trialed in 2009 on a group of Australian universities and was offered to all institutions taking part in the AUSSE from 2010. The PSEQ contains six student engagement scales (Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning) and seven outcome measures (Higher-Order Thinking, General Learning Outcomes, General Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction). Data is also collected on individual demographics and educational contexts. Item FPCA2\_TX is adapted from a Departure Intention (outcome measure) item in the PSEQ assessing future plans.

- The Australian Council for Educational Research (ACER) (2010). *The Postgraduate Student Engagement Questionnaire (PSEQ) from the Postgraduate Survey of Student Engagement (POSSE): The Australasian Survey of Student Engagement (AUSSE)*. Retrieved February 18, 2011 from [http://ausse.acer.edu.au/images/docs/AUSSE\\_2010\\_POSSE.pdf](http://ausse.acer.edu.au/images/docs/AUSSE_2010_POSSE.pdf)

**Item FPCA3\_TX:** Following consultation with GLSNZ stakeholders regarding the contents of the survey, Ministry of Education staff suggested a question examining what area/field respondents plan to seek employment in. The suggestion was submitted verbally by the Ministry of Education staff in a meeting held by the GLSNZ team to garner feedback on the draft survey on 2 November 2010. The wording of the question was adapted so that it was consistent with other items in the questionnaire. The response options were adapted from a list of job classifications on the job site 'Seek.' Response options were adapted so that the list was more comprehensive. In several instances where a series of jobs were listed together as one option, the GLSNZ team split the list up so that each job corresponded to a separate response option. 'Social work' and 'Academia' were added as response options.

- The Ministry of Education (2010, November). Field of Employment item. *Verbal Communication*.

- Seek (2011). *Job classifications*. Retrieved February 24, 2011 from <http://www.seek.co.nz/>

#### Waves, N. of items, N. of cases:

Wave	Items	N. of items	N. of cases	Notes
T0	FPCA1_TX, FPCA2_TX, FPCA3_TX, FPCA4_TX, FPCA5_TX, FPCA6_TX	6		All items administered.
T1				
T2				
T3				

#### Scoring:

**Item FCPA1\_TX:** Respondents indicate whether they intend to seek a career, a job, pursue further study (specifying at which institution), all of these options, or other (specifying other). Any number of options able to be selected.

**Item FCPA2\_TX:** If respondents had indicated that they intended to pursue employment, they indicated whether they plan to work in New Zealand, work overseas, or work in their country of origin (specifying country) in the next 2 years. Any number of options able to be selected.

**Item FCPA3\_TX:** If respondents had indicated that they intended to pursue career employment, they indicate in which field. Option to specify other fields available.

**Item FCPA4\_TX:** If respondents had indicated that they intended to pursue career employment, they indicate what they are looking for in a career. Option to specify other factors available.

**Item FCPA5\_TX:** If respondents had indicated that they intended to pursue career employment, they rank the top 3 factors that are most important to them.

**Item FCPA6\_TX:** Respondents indicate where they would like to be in 10 years time. Any number of options able to be selected.

**Recoding:** N/A

### Psychometrics:

**Items appear in Codebook in section:** Future Plans and Career Aspirations, FPCA1\_TX – FPCA7\_TX.

### Rewording of original scales:

Item	GLSNZ Survey Item	PSEQ (2010) Item	Reason(s) for adapting item
FPCA2_TX	<p>In the next two years do you plan to... Select all that apply.</p> <p>Work in New Zealand Work overseas, please where: Work in your country of origin, please specify where: None of the above</p>	<p>What are your plans for next year? Mark all that apply.</p> <p>Continue with current study; Shift to another university; Move to vocational education and training; Leave university before finishing qualification; Change to another qualification; Leave university having completed qualification</p>	<p>Time frame changed from one to two years to ensure consistency with other questions. Response options were changed because the GLSNZ team was interested in establishing where respondents intended to work (in New Zealand or offshore). The preceding question in the survey (FPCA1_TX) tapped whether respondents intended to go into further study and thus the PSEQ response options were considered unnecessary.</p>



## General Comments (GC)

**Appears as:** *General Comments* (under the wider heading *SECTION 9: GENERAL COMMENTS AND CONTACT DETAILS*)

**Variable names begin with:** GC

**Description:** This item was included at the end of the entire survey so that respondents could provide additional information or clarify responses already given, should they wish to do so.

**Scale construction:** N/A

**References:** Developed by the GLSNZ team in response to suggestions from Māori pilot participants (2011).

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	GC_TX	1		Item administered.
T1				
T2				
T3				

**Scoring:** Open-field response format.

**Recoding:** N/A

**Psychometrics:**

**Items appear in Codebook in section:** General Comments, GC\_TX

**Rewording of original scales:** N/A

## General Demographics and University Details (GDUD)

**Appears as:** *General Demographics and University Details* (under the wider heading *SECTION 1: GENERAL AND BACKGROUND INFORMATION*)

**Variable names begin with:** GDUD

**Description:** This questionnaire was constructed to assess participants' personal details (e.g., date of birth, gender, ethnicity), background (e.g., schooling, parents' education and occupation), residency status and English language skills (e.g., English language fluency, English language tests taken), and university enrolment details (e.g., qualifications enrolled in, qualifications already held, reasons for attending particular university). The questionnaire consists of items from several sources described below.

**Scale construction:** N/A

### References:

**Items GDUD1\_TX, GDUD6\_TX, GDUD7\_TX, GDUD9\_TX, GDUD17\_TX , GDUD18\_TX , GDUD19\_TX:** Developed by the GLSNZ team.

**Items GDUD2\_TX, GDUD3\_TX, GDUD4\_TX, GDUD5\_TX:** Taken from the New Zealand Census of Population and Dwellings (2011). The New Zealand census is conducted every five years to assess the number and type of people and dwellings there are in New Zealand. The census is carried out to help with planning public services (e.g., education, health, housing, and transport). It is also used to keep track of societal change. Taken from the Individual Form of the New Zealand Census of Population and Dwellings (2011), item GDUD2\_TX corresponds to question 3 on the census form and assesses respondents' sex. Adapted from the same Individual Form of the New Zealand Census of Population and Dwellings (2011), item GDUD3\_TX corresponds to question 11 on the census form and assesses respondents' ethnicity. Item GDUD4\_TX is adapted from question 14 on the same Individual Form and assesses whether participants are of Māori descent. Item GDUD5\_TX is taken from question 15 on the Individual Form and asks participants of Māori descent to list their iwi (tribes) and rohe (iwi area).

- Statistics New Zealand Census (2011). *New Zealand Census of Population and Dwellings, Individual Form*. Retrieved February 13, 2011 from <http://www.stats.govt.nz/census/2011-census/2011-census-forms-and-guidenotes.aspx>

**Item GDUD8\_TX:** Adapted from the Postgraduate Student Engagement Questionnaire (PSEQ). The PSEQ is a questionnaire in the Postgraduate Survey of Student Engagement (POSSE). The PSEQ is conducted as part of the Australian Council for Educational Research's

(ACER) Australasian Survey of Student Engagement (AUSSE). The aim of the AUSSE is to assess students' engagement in university study to help institutions evaluate and improve the quality of education that students receive. The AUSSE was conducted for the first time in 2007, with 25 Australian and New Zealand universities taking part. In 2008, 29 institutions participated and in 2009, 35 institutions participated. The PSEQ is one of three surveys run by the AUSSE. The AUSSE also runs the Student Engagement Questionnaire (SEQ), which assesses first- and third-year undergraduate students' engagement and the Staff Student Engagement Questionnaire (SSEQ), which assesses staff perspectives on student engagement. The PSEQ is adapted from the SEQ to assess postgraduate students. It is completed online and takes around 15 minutes. The PSEQ was trialed in 2009 on a group of Australian universities and was offered to all institutions taking part in the AUSSE from 2010. The PSEQ contains six student engagement scales (Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning) and seven outcome measures (Higher-Order Thinking, General Learning Outcomes, General Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction). Data is also collected on individual demographics and educational contexts. Item GDUD8\_TX is adapted from an individual demographics item in the PSEQ assessing current living arrangements.

- The Australian Council for Educational Research (ACER) (2010). *The Postgraduate Student Engagement Questionnaire (PSEQ) from the Postgraduate Survey of Student Engagement (POSSE): The Australasian Survey of Student Engagement (AUSSE)*. Retrieved February 18, 2011 from [http://ausse.acer.edu.au/images/docs/AUSSE\\_2010\\_POSSE.pdf](http://ausse.acer.edu.au/images/docs/AUSSE_2010_POSSE.pdf)

**Items GDUD15\_TX, GDUD16\_TX, GDUD22\_TX:** Adapted from the University of Otago 2009 Graduate Opinion Survey. The survey has been conducted annually since 1998 and is targeted at individuals who have graduated in the preceding 18- to 24-month period. The survey is divided into five sections in total. Section A asks participants about their course details. Section B concerns graduates' perspectives on their learning while at Otago University using the Course Experience Questionnaire (CEQ). In Section C, individuals who completed postgraduate qualifications are asked to evaluate the quality of supervision and support they received as postgraduate students. Section D examines whether a range of skills were developed at University and the extent to which these skills have transferred to life beyond university. The final section, Section E, asks respondents to provide some basic demographic information. The results of this annual survey are used to for Departmental Reviews, the University's yearly Statement of Objectives, and its Annual Report. All of the items adapted for the GLSNZ's General Demographics and University Details (GDUD) section are taken from the demographics section (Section E) of the University of Otago Graduate Opinion Survey. Item GDUD15\_TX is adapted from question E2 and assesses respondents' residency status. Item GDUD16\_TX is adapted from question E5 and evaluates whether respondents' first language is English. Item GDUD22\_TX is adapted from question E8 and asks respondents to indicate why they chose to study at the institution they attended. The response options for this item were expanded by GLSNZ to include suggestions from stakeholders and pilot participant groups.

- University of Otago (2009). *2009 Graduate Opinion Survey: Summary report, September 2009*. Dunedin, NZ: University of Otago.

- Statistics New Zealand. *Documentation about the directory of regional statistics*. Retrieved October 14, 2010 from <http://www2.stats.govt.nz/domino/external/web/DRS02.nsf/21.%20Supporting%20Documentation/About%20the%20Directory%20of%20Regional%20Statistics?OpenDocument>

**Items GDUD10\_TX, GDUD11\_TX, GDUD12\_TX, GDUD13\_TX:** Adapted from the Graduate Pathways Questionnaire (GPQ). The GPQ is a questionnaire in the Graduate Pathways Survey (GPS). The GPS was conducted by the Australian Council for Educational Research (ACER) in 2008. The GPS assessed all Australian domestic residents who had completed a bachelor degree in 2002. The aim of the GPS was to evaluate employment outcomes five years after graduates had completed their bachelor degrees, the way in which such outcomes changed over time, the paths graduates took on their way to these outcomes, and the variables that influenced these outcomes. Between July and October 2008, the GPQ was sent out to all Australian domestic residents who had completed a bachelor degree in 2002. A total of 9,238 graduates' responses were received (approximately 12% response rate). Information was collected on graduates' demographic and bachelor degree(s) and their education and employment activities one (2003), three (2005), and five (2008) years after graduation. Items GDUD10\_TX, GDUD11\_TX, GDUD12\_TX, and GDUD13\_TX are adapted from the demographics section of the GPQ. Responses to these items, which assess the highest level of education completed by the respondent's mother and father and their respective occupations, are used as an index of the respondent's socioeconomic status.

- Coates, H., & Edwards, D. (2009). The 2008 graduate pathways survey: Graduates' education and employment outcomes five years after completion of a bachelor degree at an Australian university. *Higher Education Research*. Retrieved February 19, 2011 from [http://research.acer.edu.au/higher\\_education/12](http://research.acer.edu.au/higher_education/12)

**Item GDUD14\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Victoria University staff suggested a question examining whether the respondent was the first member of his/her family to attend university in an effort to assess social mobility. The suggestion was submitted verbally by Victoria University staff in a meeting held by the GLSNZ team to garner feedback on the draft survey on 2 November 2010.

- Victoria University of Wellington (2010, November). Social mobility item. *Verbal Communication*.

**Item GDUD20\_TX:** Following the Maori consultation process with GLSNZ partners regarding the contents of the survey, Massey University staff and AUT staff suggested a question examining respondents' fluency in Teo Reo Māori. The suggestions were submitted electronically by Massey University staff on 20 July 2011 and by AUT staff on 14 June 2011. The GLSNZ team constructed a specific question in response to these suggestions.

- Massey University (2011, July). Te Reo Māori Fluency item. *Email Communication*.
- Auckland University of Technology (AUT) (2011, June). Te Reo Māori Fluency item. *Email Communication*.

**Item GDUD21\_TX:** Following the Maori consultation process with GLSNZ partners regarding the contents of the survey, AUT staff suggested a question examining respondents' fluency in sign language. The suggestion was submitted electronically by AUT staff on 14 June 2011. The GLSNZ team constructed a specific question in response to this suggestion.

- Auckland University of Technology (AUT) (2011, June). Sign Language Fluency item. *Email Communication*.

**Item GDUD24\_TX:** This item was developed in response to a question supplied by the New Zealand Ministry of Education and Ministry of Women's Affairs regarding why respondents chose their particular field of study. The item was adapted from the 2003 Career Path Survey of Former Particle Physics and Astronomy Research Council (PPARC) PhD Students. DTZ Pida Consulting and Swift Research Ltd conducted the survey on behalf of PPARC. The aim of the survey was to examine the sorts of careers that former PhD students had gone into and how valuable PhD programmes were once graduates were in the workforce. Study participants were comprised of individuals who took up a PPARC PhD award between 1992/93 and 1995/96. The study served as an update on an earlier study conducted in 1995. The 1995 study recruited former PPARC PhD students whose awards ended between 1986/88. The 2003 study's specific objectives were to determine whether there had been any change since the 1995 study in the sorts of job sectors that PPARC PhD students went into, how easy it was for PPARC PhD students to find jobs, respondents' reasons for completing a PPARC PhD, and whether the skills attained as a result of completing a PPARC PhD had changed since the 1995 study. Item GDUD24\_TX is adapted from 'Part A: Your PhD' (question 7) of the survey and examines respondents' reasons for undertaking a PhD in the particular area they chose.

- Research Councils UK: Science and Technology Facilities Council (2003). *A study of the career paths of PPARC PhD students*. Retrieved February 22, 2011 from <http://www.so.stfc.ac.uk/publications/PDF/PidaNewCohort.pdf>
- The New Zealand Ministry of Education (2010). *Contract for the provision of services in relation to a survey of international PhD graduates as part of the 2011 Graduate Longitudinal Study*.
- The New Zealand Ministry of Women's Affairs (2010). *Contract with the Graduate Longitudinal Study New Zealand*.

**Items GDUD23\_TX, GDUD25\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Victoria University staff suggested that for items GDUD22\_TX and GDUD24\_TX, respondents should be asked to rank order the selections they had made in order to determine the relative importance of respondents' reasons for attending their particular university (item GDUD22\_TX) and their reasons for choosing their field of study (item GDUD24\_TX). The suggestion was submitted via email by Victoria University staff on 28 March 2011.

- Victoria University of Wellington (2011, March). Item rankings. *Email Communication*.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	GDUD1_TX, GDUD2_TX, GDUD3_TX, GDUD4_TX, GDUD5_TX, GDUD6_TX, GDUD7_TX, GDUD8_TX, GDUD9_TX, GDUD10_TX, GDUD11_TX, GDUD12_TX, GDUD13_TX, GDUD14_TX, GDUD15_TX, GDUD16_TX, GDUD17_TX, GDUD18_TX, GDUD19_TX, GDUD20_TX, GDUD21_TX, GDUD22_TX, GDUD23_TX, GDUD24_TX, GDUD25_TX	25		All items administered.
T1				
T2				
T3				

**Scoring:** All of the items in this questionnaire are stand-alone. All responses except 3 (see below) are non-numeric. Scores are not combined and means are not computed.

**Items GDUD17\_TX, GDUD20\_TX, GDUD21\_TX:** Respondents indicate their levels of fluency in English (GDUD17\_TX), Te Reo Māori (GDUD20\_TX), and sign language (GDUD21\_TX) on a 5-point Likert scale (Not at all fluent = 1, Very fluent = 5). Min score = 1, max score = 5 for each item. A higher score indicates greater proficiency in the language.

**Recoding:** N/A

**Psychometrics:**

**Items appear in Codebook in section:** General Demographics and University Details, GDUD1\_TX – GDUD25\_TX

### Rewording of original scales:

Item	GLSNZ Survey Item	NZ Census (2011) Item	Reason(s) for adapting item
GDUD4_TX	Are you of Māori descent (i.e., did you have a Māori birth parent, grandparent or great-grandparent, etc.)?  Yes; No; Don't know	Are you descended from a Māori (that is, did you have a Māori birth parent, grandparent or great-grandparent, etc.)?  yes; no; don't know	Capitalised first letter of response options to ensure item followed same format as other response options in GLSNZ survey. Wording of question adapted slightly to render it less abrupt.
Item	GLSNZ Survey Item	ACER PSEQ (2010) Item	Reason(s) for adapting item
GDUD8_TX	Which of the following describes your current living arrangements? Select the option that best applies to you.  Living with friends or in a shared house; Living with parents or guardians; Living by myself; Living with partner/spouse and/or children; University hall or college of residence; Other, please specify:	Which of the following describes your current living arrangement? Select the option that best applies to you.  On campus in a university college or hall of residence; Off campus student accommodation; Living with friends or in a share house; Living with parents or guardians; Living by yourself; Living with a partner or children; Other	Changed order in which response options were presented so that options likely to be selected most often (by final year student cohort) presented at top of list. Wording of some response options adapted to better reflect NZ context. 'Off campus student accommodation' option omitted as 'University hall or college of residence' option was considered to capture both on-campus and off-campus student accommodation.
Item	GLSNZ Survey Item	University of Otago Graduate Opinion Survey Item	Reason(s) for adapting item
GDUD15_TX	What is your residency status?  New Zealand citizen/permanent resident; Australian citizen/permanent resident; International citizenship (i.e., do not have Australian or New Zealand permanent citizenship/residency), please specify:: Multiple citizenship (e.g., dual citizenship)	Student status in your final year:  New Zealand student; Australian student; International student ( <i>does not include holders of Australian or New Zealand permanent residency</i> )	Question reworded so that it was more explicit about the fact that it was citizenship/residency status that was of interest. The term 'student status' was considered too vague.

Item	GLSNZ Survey Item	University of Otago Graduate Opinion Survey Item	Reason(s) for adapting item
GDUD16_TX	<p>Is English your first language?</p> <p>Yes; No, please state your first language:</p>	<p>Is your first language English?</p> <p>Yes; No</p>	<p>Question reworded so that it was more direct.</p>
GDUD22_TX	<p>Why did you choose the university you are currently attending? Select all those that apply.</p> <p>Family connection; Talking to older students or graduates; Friends were attending same university; The academic reputation of the university; The opportunity to work with a particular academic; The university offered the course/programme relevant to the career I sought to pursue; Costs (e.g., living, travel, fees); Culturally appropriate programmes of study; Campus lifestyle; Good halls of residence; Course/programme availability; Good support systems (e.g. Maori, Pacific Island and International support); Location; It was the nearest university; Advice from teacher/career adviser; University marketing (e.g., open days, advertisement); Scholarship(s) availability; To enjoy new places; To meet new people; To increase independence; Other, please specify:</p>	<p>Why did you choose to study at the University of Otago? (<i>select up to 3 from the following</i>)</p> <p>Family connection and/or talking to older students or graduates; The academic reputation of the University; Campus lifestyle and good Halls of Residence; Course available only at Otago; Nearest university; To enjoy new places, people and to increase independence; Other (<i>please specify</i>)</p>	<p>The question was adapted so it applied to Universities in general (not just the University of Otago). Respondents were permitted to select as many options as they felt applied. The list of response options was extended to render it more comprehensive. Some response options that contained two parts (e.g., ‘Campus lifestyle and good Halls of Residence’) were separated as both were considered areas of interest and leaving them combined would have prevented the GLSNZ team from drawing specific conclusions about respondents’ motivations for attending a particular University.</p>



Item	GLSNZ Survey Item	GPQ (2008) Item	Reason(s) for adapting item
GDUD10_TX	<p>What is the highest level of education completed by your father/male caregiver?</p> <p>Did not attend secondary school; Some or all of secondary school; Vocational certificate or diploma (e.g., certificate in construction); Undergraduate university degree, certificate, or diploma; Postgraduate university degree, certificate, or diploma; Not sure; N/A</p>	<p>What is the highest level of education completed by your father?</p> <p>No school or primary school; Some or all of secondary school; Vocational certificate or diploma; University degree or diploma; Not sure</p>	<p>‘Male caregiver’ was added to the question to cover instances in which the respondent does not have a father. The response option ‘No school or primary school’ was omitted to suit the New Zealand context. The response option ‘University degree or diploma’ was extended to include ‘certificate.’ ‘Undergraduate’ preceded the list of qualifications. ‘Postgraduate university degree or diploma’ was added as a response option as it was considered important to note the level of qualification parents had attained. ‘N/A’ was added as an option to cover instances in which the respondent does not know their father. Example added to ‘Vocational Certificate...’ to clarify.</p>
GDUD11_TX	<p>What is your father/male caregiver’s current or most recent <u>main</u> occupation (e.g., schoolteacher, sales manager, homemaker)?</p> <p>(Open response); N/A</p>	<p>What was your father’s main occupation during your final year of primary school? For example: SCHOOL TEACHER, KITCHEN HAND, SALES MANAGER, UNEMPLOYED, HOME DUTIES</p>	<p>‘Male caregiver’ was added to the question to cover instances in which the respondent does not have a father. ‘Current or most recent’ main occupation was considered more relevant than ‘during your final year of primary school.’ The list of examples was shortened in the interests of brevity. ‘N/A’ was added as an option to cover instances such as when the respondent does not know their father.</p>
GDUD12_TX	As per item GDUD11_TX but with reference to mother/female caregiver.		
GDUD13_TX	As per item GDUD12_TX but with reference to mother/female caregiver.		

Item	GLSNZ Survey Item	PPARC PhD Survey (2003) Item	Reason(s) for adapting item
GDUD24_TX	<p>Why did you choose your particular topic/field of study? Select all those that apply.</p> <p>A strong interest in the topic/field; Wanted to pursue a career in this topic/field; To increase my earning potential; Lower course fees; Did not know what else to do (e.g., no career plans at the time); No suitable alternative employment; Friend(s)/peer(s) were pursuing this field; Recommendation of careers adviser and/or someone working in the field; Recommendation of teacher(s); Family expectations; Other, please specify:</p>	<p>Why did you decide to study for a PhD in your subject area? PLEASE ✓ ALL THAT APPLY AND THEN ✓ THE MAIN REASON</p> <p>A 'love' of the subject/research; Wanted to pursue a career in academia/research; To enhance general career prospects; Did not know what else to do (eg no career plans at the time); No suitable alternative employment; Friends/peers were taking PhDs; Encouraged by college/university staff or parents/family to do it; Enjoyed university life; Other (<i>please provide details below</i>)</p>	<p>Items adapted to suit New Zealand context. Items and wording of question adapted to suit the general student population rather than PhD students specifically. More options added to capture a wider range of potential reasons for choosing a particular field.</p>

## General Feelings (GF)

**Appears as:** *General Feelings* (under the wider heading *SECTION 5: HEALTH AND WELL-BEING*)

**Variable names begin with:** GF

**Description:** This questionnaire was constructed to assess respondents' mental well-being, self-esteem, and general self-efficacy. The questionnaire consists of items from several sources described below.

### Scale construction:

Scale	Items
Warwick-Edinburgh Mental Well-being Scale (14 items)	GF1_TX, GF2_TX, GF3_TX, GF4_TX, GF5_TX, GF6_TX, GF7_TX, GF8_TX, GF9_TX, GF10_TX, GF11_TX, GF12_TX, GF13_TX, GF14_TX
Rosenberg Self-Esteem Scale (5 items)	GF15_TX, GF16_TX, GF17_TX, GF18_TX, GF19_TX
General Self-Efficacy Scale (5 items)	GF20_TX, GF21_TX, GF22_TX, GF23_TX, GF24_TX

### References:

**Items GF1\_TX, GF2\_TX, GF3\_TX, GF4\_TX, GF5\_TX, GF6\_TX, GF7\_TX, GF8\_TX, GF9\_TX, GF10\_TX, GF11\_TX, GF12\_TX, GF13\_TX, GF14\_TX:** Items taken directly from the Warwick-Edinburgh Mental Well-being Scale. This scale consists of 14 items that assess positive mental health (mental well-being). The scale examines positive thoughts and feelings, including both hedonic and eudaimonic perspectives. These aspects of mental health include positive affect (feelings of optimism, cheerfulness, and relaxation), satisfying interpersonal relationships, and positive functioning (energy, clear thinking, self acceptance, personal development, competence, and autonomy).

- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(63). doi: 10.1186/1477-7525-5-63

**Items GF15\_TX, GF16\_TX, GF17\_TX, GF18\_TX, GF19\_TX:** Items taken directly from the Rosenberg Self-Esteem Scale. This scale consists of 10 items; 5 items were selected for inclusion in the GLSNZ survey. The scale measures personal self-esteem. It was developed on 5,024 high school students from 10 randomly-selected schools in New York State.

- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Wylie, C. R. (1974). *The self-concept: Revised edition*. Lincoln, NE: University of Nebraska Press.
- Crandal, R. (1973). The measurement of self-esteem and related constructs. In J. P. Robinson & P. R. Shaver (Eds), *Measures of social psychological attitudes: Revised edition* (pp. 80-82). Ann Arbor, MI: ISR.

**Items GF20\_TX, GF21\_TX, GF22\_TX, GF23\_TX, GF24\_TX:** Items taken directly from the General Self-Efficacy Scale (GSE). The original version was German but it has since been revised and is now available in 33 languages. The scale consists of 10 items and was developed to assess general sense of perceived self-efficacy with the aim of predicting individuals' ability to cope with daily hassles as well as adaptation after experiencing different kinds of stressful life events. After pilot testing of 164 3<sup>rd</sup>-year students at the University of Otago in July 2007, 5 items with the highest alphas were included in the survey.

- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	GF1_TX, GF2_TX, GF3_TX, GF4_TX, GF5_TX, GF6_TX, GF7_TX, GF8_TX, GF9_TX, GF10_TX, GF11_TX, GF12_TX, GF13_TX, GF14_TX, GF15_TX, GF16_TX, GF17_TX, GF18_TX, GF19_TX, GF20_TX, GF21_TX, GF22_TX, GF23_TX, GF24_TX	24		All items administered.
T1				
T2				
T3				

**Scoring:**

**Items GF1\_TX, GF2\_TX, GF3\_TX, GF4\_TX, GF5\_TX, GF6\_TX, GF7\_TX, GF8\_TX, GF9\_TX, GF10\_TX, GF11\_TX, GF12\_TX, GF13\_TX, GF14\_TX:** Respondents indicate their answers to each item on a 5-point Likert scale (None of the time = 1, Rarely = 2, Some of the time = 3, Often = 4, All of the time = 5). Sum all items (all items have equal weights). Min score = 14, max score = 70. A higher score indicates better mental wellbeing.

**Items GF15\_TX, GF16\_TX, GF17\_TX, GF18\_TX, GF19\_TX:** Respondents indicate their answers to each item on a 4-point Likert scale (Strongly disagree = 1, Disagree = 2, Agree = 3, Strongly agree = 4). Sum all items. Min score = 5, max score = 20. A higher score indicates higher self-esteem.

**Items GF20\_TX, GF21\_TX, GF22\_TX, GF23\_TX, GF24\_TX:** Respondents indicate their answers to each item on a 4-point Likert scale (Not at all true = 1, Hardly true = 2, Moderately true = 3, Exactly true = 4). Sum all items. Min score = 5, max score = 20. A higher score indicates a greater sense of general self-efficacy.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** General Feelings, **GF1\_TX – GF24\_TX**

**Rewording of original scales:** N/A

## General Health (GH)

**Appears as:** *General Health* (under the wider heading *SECTION 5: HEALTH AND WELL-BEING*)

**Variable names begin with:** GH

**Description:** This questionnaire asks respondents 10 questions about their general health including their physical health, routine physical activities, and smoking and drinking habits. The questions are from a variety of sources described below.

**Scale construction:** N/A

### References:

**Items GH1\_TX, GH4\_TX:** Item GH1\_TX is a specific rating of physical health and item GH4\_TX is a rating of ability to carry out everyday physical activities adapted from the 10-item Global Health scale from:

- Patient Reported Outcomes Measurement Information System (PROMIS) Health Organization (2009). *Global Items*, v.1.1. Retrieved March 3, 2011 from <http://www.nihpromis.org/default.aspx>

**Items GH2\_TX, GH3\_TX:** Adapted from the University of Otago 2009 Graduate Opinion Survey. The survey has been conducted annually since 1998 and is targeted at individuals who have graduated in the preceding 18- to 24-month period. The survey is divided into five sections in total. Section A asks participants about their course details. Section B concerns graduates' perspectives on their learning while at Otago University using the Course Experience Questionnaire (CEQ). In Section C, individuals who completed postgraduate qualifications are asked to evaluate the quality of supervision and support they received as postgraduate students. Section D examines whether a range of skills were developed at University and the extent to which these skills have transferred to life beyond university. The final section, Section E, asks respondents to provide some basic demographic information. The results of this annual survey are used to for Departmental Reviews, the University's yearly Statement of Objectives, and its Annual Report. The items adapted for the GLSNZ's General Health (GH) section are taken from the demographics section (Section E) of the University of Otago Graduate Opinion Survey. Items GH2\_TX and GH3\_TX are adapted from question E3 of the Graduate Opinion Survey, which asks respondents to indicate if they have a long-term medical condition/ impairment/ disability and, if so, the nature of the impairment (e.g., hearing, visual, psychological, etc.). Respondents are also asked if their impairment has affected their studies. Item GH3\_TX was adapted to include impacts on work as well as studies. If respondents indicate that their impairment had affected their work/ studies, they were also asked to rate the extent to which it had done so (Very little = 1 to Very much = 5).

- University of Otago (2009). *2009 Graduate Opinion Survey: Summary report, September 2009*. Dunedin, NZ: University of Otago.

**Item GH5\_TX:** This item is a rating of ability to carry out strenuous physical activities adapted from the 10-item Physical Functioning – Short Form 1 from:

- Patient Reported Outcomes Measurement Information System (PROMIS) Health Organization (2009). *Physical Function – Short Form 1*. Retrieved March 3, 2011 from <http://www.nihpromis.org/default.aspx>

**Items GH6\_TX, GH7\_TX:** These items concern smoking habits and are adapted from the Dunedin Multidisciplinary Health and Development Study (DMHDS) Diagnostic Interview Schedule.

- Kim-Cohen, J., Caspi, A., Moffitt, T., Harrington, H., Milne, B., & Poulton, R. (2003). Prior juvenile diagnoses in adults with mental disorder. *Archives of General Psychiatry*, 60, 709-717.

This interview schedule is originally published in:

- Robins, L., Helzer, H., Croughan, J., & Ratcliff, K. (1981). National Institute of Mental Health Diagnostic Interview Schedule: Its history, characteristics, and validity. *Archives of General Psychiatry*, 38, 381-389.

**Items GH8\_TX, GH9\_TX, GH10\_TX:** These items concern alcohol consumption habits and are adapted from the three items of the Alcohol Use Disorders Identification Test (AUDIT). The AUDIT was developed from a 6-country World Health Organisation (WHO) collaborative project to design a screening measure for harmful alcohol consumption. A 150-item assessment schedule was administered to 1888 individuals (48% were drinkers – the 36% of non-drinkers and 16% of alcoholics formed reference groups for instrument validation). The 150-item assessment schedule included socio-demographic variables, presenting conditions, current symptomatology, past medical history, alcohol consumption, other substance use, diet, drinking behaviour, psychological reactions to alcohol, alcohol-related problems, family history of alcoholism, and self-perception of an alcohol problem. From the 150 items in the assessment schedule, 10 items were selected for inclusion in the full AUDIT. These items measure alcohol consumption, drinking behaviour, and alcohol-related problems. Items GH8\_TX, GH9\_TX, and GH10\_TX are adapted from the 3 items of the AUDIT – Consumption subscale (AUDIT-C), which measure usual frequency of drinking, the quantity consumed, and the frequency of episodic heavy drinking. The AUDIT-C has similar specificity and sensitivity to the full AUDIT. The full AUDIT correctly classified 99% of alcoholics as using alcohol harmfully. Only 0.5% of non-drinkers scored highly on the AUDIT. Item GH9\_TX contains a graphic illustrating examples of what constitutes a standard drink.

- Saunders, J. B., Aasland, O. G., Babor, T. F., De La Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption–II. *Addiction*, 88, 791-804.
- Kypri, K., McCambridge, J., Cunnigham, J. A., Vater, T., Bowe, S., De Graaf, B., Saunders, J. B., & Dean, J. (2010). Web-based alcohol screening and brief intervention for Māori and non-Māori: The New Zealand e-SBINZ trials. *BioMed Central (BMC) Public Health*, 10. doi:10.1186/1471-2458-10-781 <http://www.biomedcentral.com/1471-2458/10/781>

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	GH1_TX, GH2_TX, GH3_TX, GH4_TX, GH5_TX, GH6_TX, GH7_TX, GH8_TX, GH9_TX, GH10_TX	10		All items administered.
T1				
T2				
T3				

**Scoring:**

**Item GH1\_TX:** Respondents rate their overall physical health on a 5-item scale (Poor, Fair, Good, Very good, Excellent). Responses to be assigned numerical values: 1 = Poor, 5 = Excellent. Min score = 1, max score = 5. A higher score indicates better physical health.

**Item GH2\_TX:** Respondents indicate whether or not they have a medical condition/ impairment/ disability (Yes, No). If yes, participants indicate the nature of the impairment.

**Item GH3\_TX:** Respondents who indicate an impairment are asked to indicate whether it has affected their studies and/ or work. If so, respondents indicate the extent of the impairment on a 5-point Likert scale (Very little = 1 to Very much = 5). Min score = 1, max score = 5. A higher score indicates greater impairment.

**Item GH4\_TX:** Respondents indicate the extent to which they are able to carry out everyday physical activities (Not at all; A little; Moderately; Mostly; Completely). Responses to be assigned numerical values: 1 = Not at all, 5 = Completely. Min score = 1, max score = 5. A higher score indicates greater ability to carry out everyday physical activities.

**Item GH5\_TX:** Respondents indicate the extent to which their health limits them in doing vigorous physical activities (Cannot do; Quite a lot; Somewhat; Very little; Not at all). Responses to be assigned numerical values: 1 = Cannot do, 5 = Not at all. Min score = 1, max score = 5. A higher score indicates greater ability to do vigorous physical activities.

**Item GH6\_TX:** Respondents indicate if they have smoked at least once per day for a month or more in the last 12 months (Yes, No).

**Item GH7\_TX:** Respondents indicate how many cigarettes they smoke each day from 0 to 40+.



**Item GH8\_TX:** Respondents indicate how often they have drinks containing alcohol (Never; Almost never; Less than once a month; Once a month; Once every two weeks; Once a week; Two or three times a week; Four or five times a week; Six or seven times a week). Responses to be assigned numerical values: 1 = Never, 9 = Six or seven times a week. Min score = 1, max score = 9. A higher score indicates greater frequency of usual drinking.

**Item GH9\_TX:** Respondents indicate the number of alcoholic drinks typically consumed on a typical day from 1 to 25+. Responses to be assigned numerical values: 1 = 1, 25 = 25+ or more. Min score = 1, max score = 25. A higher score indicates greater quantity of drinks consumed.

**Item GH10\_TX:** Respondents indicate how often they consume 6 or more drinks on one occasion (Never; Once or twice a year; Less than monthly; Monthly; Weekly; Daily or almost daily). Responses to be assigned numerical values: 1 = Never, 6 = Daily or almost daily. Min score = 1, max score = 6. A higher score indicates greater frequency of episodic heavy drinking.

**Means:**

**Items GH1\_TX, GH4\_TX, GH5\_TX:** Can sum items to obtain overall measure of physical health. Min score = 3, max score = 15. A higher score indicates better physical health.

**Items GH8\_TX, GH9\_TX, GH10\_TX:** Can sum items to obtain overall measure alcohol consumption. Min score = 3, max score = 44. A higher score indicates greater consumption of alcohol.

**Recoding:** N/A

**Psychometrics:**

**Items appear in Codebook in section:** General Health, GH1\_TX – GH10\_TX

### Rewording of original scales:

Item	GLSNZ Survey Item	PROMIS Global Health Item
GH1_TX	How would you rate your overall physical health?	In general, how would you rate your physical health?
Item	GLSNZ Survey Item	University of Otago Graduate Opinion Survey Item
GH2_TX	Do you have a long-term medical condition, impairment or disability?  No; Yes, please specify:	Do you have a <u>long term</u> medical condition, impairment or disability? No; Yes (please specify: Hearing, Visual, Physical, Learning, Psychological/Psychiatric, Other [please specify])
GH3_TX	Has your condition, impairment or disability affected your studies and/or work?	If YES did your condition, impairment or disability affect your studies?
Item	GLSNZ Survey Item	PROMIS Physical Function Item
GH5_TX	Does your health limit you in doing vigorous activities, such as running, lifting heavy objects, participating in strenuous sports?	Does your health now limit you in doing vigorous activities, such as running, lifting heavy objects, participating in strenuous sports?
Item	GLSNZ Survey Item	AUDIT-C item
GH8_TX	How often do you have a drink containing alcohol?  Never; Almost never; Less than once a month; Once a month; Once every two weeks; Once a week; Two or three times a week; Four or five times a week; Six or seven times a week	How often do you have a drink containing alcohol?  Never; Monthly or less; Two to four times a month; Two to three times a week; Four or more times a week
GH9_TX	How many standard drinks containing alcohol do you have on a typical day when you are drinking?  1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25+	How many drinks containing alcohol do you have on a typical day when you are drinking?  1 or 2; 3 or 4; 5 or 6; 7 to 9; 10 or more
GH10_TX	How often do you have six or more standard drinks on one occasion?  Never; Once or twice a year; Less than monthly; Monthly; Weekly; Daily or almost daily	How often do you have six or more drinks on one occasion?  Never; Less than monthly; Monthly; Weekly; Daily or almost daily

## Goals, Aspirations and Values (GAV)

**Appears as:** *Goals, Aspirations and Values* (under the wider heading *SECTION 3: ASPIRATIONS, GOALS AND VALUES*)

**Variable names begin with:** GAV

**Description:** These questions examine respondents' conventional values (goals and behaviours in relation to economic and social success in society), personal values and goals, religiosity/ spirituality, and self-serving and altruistic attitudes. The items are from several sources described below.

### Scale construction:

Scale	Items
Conventional values (9 items)	GAV1_TX, GAV2_TX, GAV3_TX, GAV8_TX, GAV11_TX, GAV12_TX, GAV14_TX, GAV15_TX, GAV27_TX
Personal values and goals (15 items)	GAV4_TX, GAV5_TX, GAV6_TX, GAV9_TX, GAV10_TX, GAV16_TX, GAV17_TX, GAV18_TX, GAV19_TX, GAV21_TX, GAV22_TX, GAV23_TX, GAV24_TX, GAV25_TX, GAV26_TX
Religiosity scale (1 item)	GAV28_TX
Self-serving and altruism scale (3 items)	GAV7_TX, GAV13_TX, GAV20_TX

### References:

**Items GAV1\_TX, GAV2\_TX, GAV3\_TX, GAV8\_TX, GAV11\_TX, GAV12\_TX, GAV14\_TX, GAV15\_TX, GAV27\_TX:** Adapted from the Iowa Youth and Family Project's 'Conventional Values' scale. The reference in the Iowa Youth and Family Project measurement book states that: "These scales were adapted from measures developed for a multisite study on the cases and correlates of delinquency sponsored by the Office of Juvenile Justice and Delinquency Prevention conducted by T. Thornberry, D. Huizinga, and R. Loeber (Thornberry, Personal Communication, 1989)."

- Iowa Youth and Family Project Codebook. Items BF204001, BF204002, BF204003, BF204004, BF204007, BF204008, BF204009, BF204010, BF201011.

Items GAV1\_TX, GAV2\_TX, GAV3\_TX, GAV8\_TX, GAV11\_TX, GAV12\_TX, GAV14\_TX, and GAV15\_TX also appear in:

- Whitbeck, L. B., Simons, R. L., Conger, R. D., & Lorenz, F. O. (1989). Value socialization and peer group affiliation among early adolescents. *The Journal of Early Adolescence*, 9, 436-453.

Whitbeck et al. (1989) describe a 10-item scale measuring success-oriented values. Of these values, 8 were adapted for the GLSNZ survey. The original source (Thornberry) is an unpublished manuscript:

- Thornberry, T. (1988). *Rochester youth development study*. Unpublished manuscript, School of Criminal Justice, State University of New York, Albany.

**Items GAV4\_TX, GAV5\_TX, GAV6\_TX, GAV9\_TX, GAV16\_TX, GAV17\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested 6 questions examining the importance of contributing to society, working ethically and sustainably, being recognised as a professional, being entrepreneurial, and studying towards a qualification. The suggestions were submitted in writing by Massey University staff; report dated 18 November 2010. On the basis of these suggestions, the GLSNZ team created questions and response options.

- Massey University (2010, November). Goals, Aspirations and Values items. *Feedback on the Graduate Longitudinal Study Draft Questionnaire Booklet*.

**Items GAV7\_TX, GAV13\_TX, GAV20\_TX:** Adapted from the Iowa Youth and Family Project's Self-serving and Altruism scale. NB: Items were taken from the Altruism Subscale only. Reference information from the Iowa Youth and Families Project's measurement book indicates that the scale was developed by Les Whitbeck. Whitbeck et al. (1989) state that "altruistic values were measured by 10 items from the Braithwaite and Law (1985) adaptation of Rokeach's Value Survey (1973). ... It is derived from Rokeach's Value Survey, which is a standard value measure that has been used extensively for research. It differs from Rokeach's measure in that it is more extensive and involves rating values, rather than ranking values in terms of importance" (p. 442). NB: Rokeach's value survey consists of two sets of 18 values, which participants were asked to rank-order. Of the 36 values, Braithwaite and Law (1985) included 4 values in their value-rating survey. Braithwaite and Law asked participants to rate the personal importance of a number of values separated into 3 inventories. The Goal and Social Values Inventories included items addressing (1) international harmony and equality, (2) national strength and order, (3) traditional religiosity, (4) personal growth and inner harmony, (5) physical well-being, (6) secure and satisfying interpersonal relationships, (7) social standing, (8) social stimulation, and (9) individual rights. The Mode Values Inventory included items addressing (1) positive orientation to others, (2) competence and effectiveness, (3) propriety in dress and manners, (4) religious commitment, (5) assertiveness, (6) withdrawal from others, (7) carefreeness, (8) honesty, (9) thriftiness, and (10) getting ahead. In the GLSNZ survey, items GAV7\_TX and GAV13\_TX were included from the 'international harmony and equality' items (Goal and Social Values Inventories) and item GAV20\_TX was included from the 'religious commitment' items (Mode Values Inventory). The response scale was changed to render it more consistent with other items in the GLSNZ survey and the 'Goals, Aspirations and Values section in particular (see section on 'Rewording of original scales').

- Braithwaite, J., & Law, H. (1985). Structure of human values: Testing the adequacy of the Rokeach value survey. *Journal of Personality and Social Psychology*, 49, 250-263.
- Iowa Youth and Family Project Codebook. Items BF204023, BF204028, BF204034.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Whitbeck, L. B., Simons, R. L., Conger, R. D., & Lorenz, F. O. (1989). Value socialization and peer group affiliation among early adolescents. *Journal of Early Adolescence*, 9, 436-453.

**Items GAV10\_TX, GAV21\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Canterbury University staff suggested questions examining the importance of a family-friendly work/life balance and the importance of making a difference. The suggestions were submitted verbally by Canterbury University staff in a meeting held by the GLSNZ team to garner feedback on the draft survey on 15 November 2010. The GLSNZ team created questions and response options for these suggestions.

- The University of Canterbury (2010, November). Work/life balance and making a difference items. *Verbal Communication*.

**Items GAV18\_TX, GAV19\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested 2 questions examining the importance of being in good health and travelling. The suggestions were submitted in writing by Massey University staff; report dated 9 March 2011. On the basis of these suggestions, the GLSNZ team created questions and response options.

- Massey University (2011, March). Goals, Aspirations and Values items. *Feedback on the Graduate Longitudinal Study Penultimate Draft Questionnaire*.

**Item GAV22\_TX:** Following the Maori consultation process with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining the importance of being culturally responsive. The suggestion was submitted electronically by Massey University staff on 20 July 2011. The GLSNZ team constructed a specific question and response options (to conform with other items in the questionnaire) in response to this suggestion.

- Massey University (2011, July). Cultural Responsivity item. *Email Communication*.

**Items GAV23\_TX, GAV24\_TX, GAV25\_TX, GAV26\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, the Ministry of Women's Affairs suggested questions examining the relative importance family and career aspirations. The Ministry of Women's Affairs is interested in examining what gender differences there are in respondents' aspirations. The suggestions were submitted verbally by Ministry of Women's Affairs staff in a meeting held by the GLSNZ team to garner feedback on the draft survey on 2 November 2010. From these suggestions, the GLSNZ team created 4 questions and response options.

- The New Zealand Ministry of Women's Affairs (2010, November). Family and career aspirations items. *Verbal Communication*.

**Items GAV28\_TX:** Adapted from the Iowa Youth and Family Project's Religiosity scale. Reference information from the Iowa Youth and Families Project measurement book indicates that the questions were adapted from a survey by Kessler and that items come from diverse sources including the Gallup Poll (Fundamentalism). NB: item GAV27\_TX is from the Religious 1 subscale. The response options for item GAV27\_TX were adapted to be consistent with response options of the other items in the questionnaire (Original response options were: Very important = 1, Fairly important = 2, Not too important = 3, Not at all important = 4).

- Iowa Youth and Family Project Codebook. Item BF204039.

#### Waves, N. of items, N. of cases:

Wave	Items	N. of items	N. of cases	Notes
T0	GAV1_TX, GAV2_TX, GAV3_TX, GAV4_TX, GAV5_TX, GAV6_TX, GAV7_TX, GAV8_TX, GAV9_TX, GAV10_TX, GAV11_TX, GAV12_TX, GAV13_TX, GAV14_TX, GAV15_TX, GAV16_TX, GAV17_TX, GAV18_TX, GAV19_TX, GAV20_TX, GAV21_TX, GAV22_TX, GAV23_TX, GAV24_TX, GAV25_TX, GAV26_TX, GAV27_TX, GAV28_TX	28		All items administered.
T1				
T2				
T3				

**Scoring:** Respondents indicate their answers on 5-point Likert scales (Not at all important = 1, Not very important = 2, Somewhat important = 3, Very important = 4, Extremely important = 5). Min score = 28; max score = 140.

#### Means:

**Conventional values:** Sum items GAV1\_TX, GAV2\_TX, GAV3\_TX, GAV8\_TX, GAV11\_TX, GAV12\_TX, GAV14\_TX, GAV15\_TX, GAV27\_TX. Min score = 9, max score = 45. The higher the score, the greater the endorsement of conventional values.

**Personal values and goals:** Items will be broken down further – to be confirmed. Family-oriented values: Sum items GAV23\_TX, GAV24\_TX, GAV25\_TX (after item GAV24\_TX recoded). Min score = 3, max score = 15. A higher score reflects greater family-oriented values. Career-oriented values: Sum items GAV24\_TX, GAV25\_TX (after item GAV24\_TX recoded). Min score = 2, max score = 10. A lower score reflects greater emphasis on the importance of having a career.

**Religiosity:** Item GAV28\_TX. Min score = 1, max score = 5. A higher score indicates greater importance of religious/spiritual beliefs.

**Self-serving and altruism:** Sum items GAV7\_TX, GAV13\_TX, GAV20\_TX. Min score = 3, max score = 15. A higher score indicates a greater altruistic orientation.

**Recoding:** Item GAV24\_TX

**Psychometrics:**

**Items appear in Codebook in section:** Goals, Aspirations and Values, GAV1\_TX – GAV28\_TX

**Rewording of original scales:**

<b>Item</b>	<b>GLSNZ Survey Item</b>	<b>Whitbeck et al. (1989) Item</b>	<b>Iowa Youth &amp; Family Project Item</b>
GAV1_TX	Owning your own home?	To own your own home	To own your own home
GAV2_TX	Having a great deal of money?	To have a great deal of money	To have a great deal of money
GAV3_TX	Having a well-paid job?	To have a good-paying job	To have a good-paying job
GAV8_TX	Having a good reputation in the community?	To have a good reputation in the community	To have a good reputation in the community
GAV11_TX	Working hard to get ahead?	To work hard to get ahead	To work hard to get ahead
GAV12_TX	Having a university education?	To have a college education	To have a college education
GAV14_TX	Saving money for the future?	To save money for the future	To save money for the future
GAV15_TX	Being careful about what you spend?	To be careful about what you spend	To be careful about what you spend
GAV21_TX	Being a religious/spiritual person?	N/A	To be a religious person

<b>Item</b>	<b>GLSNZ Survey Item</b>	<b>Rokeach (1973) Item</b>	<b>Braithwaite &amp; Law (1985) Item</b>	<b>Whitbeck et al. (1989) Item</b>	<b>Iowa Youth &amp; Family Project Item</b>
Response scale	1 = Not at all important, 2 = Not very important, 3 = Somewhat important, 4 = Very important, 5 = Extremely important	Rank ordering of items	1 = I reject this as a guiding principle in my life, 2 = I am inclined to reject this as a guiding principle in my life, 3 = I neither reject nor accept this as a guiding principle in my life, 4 = I am inclined to accept this as a guiding principle in my life, 5 = I accept this as a guiding principle in my life, 6 = I accept this as very important as a guiding principle in my life, 7 = I accept this as of the greatest importance as a guiding principle in my life	1 = I very strongly reject this rule or goal to 7 = I very strongly accept this rule or goal	1 = I very strongly reject this rule or goal, 2 = I somewhat reject this rule or goal, 3 = I neither reject nor accept this rule or goal, 4 = I slightly accept this rule or goal, 5 = I somewhat accept this rule or goal, 6 = I strongly accept this rule or goal, 7 = I very strongly accept this rule or goal
GAV7_TX	Giving everyone an equal chance in life?	Equality (brotherhood, equal opportunity for all)	Equal opportunity for all: giving everyone an equal chance in life	Equal opportunity for all: giving everyone an equal chance in life	To have equal opportunity for all: giving everyone an equal chance in life.
GAV13_TX	Improving the welfare of people in need?		A good life for others: improving the welfare of all people in need	Improving the welfare of people in need: a good life for others	To improve the welfare of people in need: a good life for others.
GAV20_TX	Being unselfish?		Self-sacrificing: putting the interest of others before your own	Unselfish: putting the interests of others before your own	To be unselfish: putting the interests of others before your own.



## Local Community Involvement (LCI)

**Appears as:** *Local Community Involvement* (under the wider heading *SECTION 7: COMMUNITY INVOLVEMENT*)

**Variable names begin with:** LCI

**Description:** This questionnaire addresses the extent to which people engage within a participative community by asking respondents about their participation in community networks, social proactivity, and tolerance of social diversity. Collectively, this questionnaire is designed to assess an individual's level of social capital determined by their levels of community participation and the social cohesion that arises from that participation.

**Scale construction:** N/A

**References:** The 15 items in the GLSNZ survey were selected from a larger (36-item) instrument described in:

- Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *The Journal of Applied Behavioral Science*, 36, 23-42.

Examples (or additional examples) were added to items LCI1\_TX, LCI2\_TX, LCI3\_TX, LCI4\_TX, and LCI7\_TX in order to better suit the New Zealand context.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	LCI1_TX, LCI2_TX, LCI3_TX, LCI4_TX, LCI5_TX, LCI6_TX, LCI7_TX, LCI8_TX, LCI9_TX, LCI10_TX, LCI11_TX, LCI12_TX, LCI13_TX, LCI14_TX, LCI15_TX	15		All items administered.
T1				
T2				
T3				

**Scoring:** Respondents indicate their answers on 4-point Likert scales. For items LCI1\_TX, LCI2\_TX, LCI3\_TX, LCI4\_TX, LCI5\_TX, LCI6\_TX, LCI7\_TX, LCI8\_TX, and LCI9\_TX, respondents rate how often they engage in community-related behaviours on scales ranging from No, not at all = 1 to Yes, frequently/definitely/very active, etc. = 4. Note that there are varying degrees of frequency for each 'Yes,

frequently/definitely/very active' item (e.g., at least once a week, at least 3, at least 5 times, etc.). For items LCI10\_TX, LCI11\_TX, LCI12\_TX, LCI13\_TX, LCI14\_TX, and LCI15\_TX, respondents indicate how they might behave in certain situations on scales ranging from No, not at all = 1 to Yes, definitely = 4. Sum all items. Min score = 15, max score = 60. The higher the score, the higher the respondent's social capital.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** Local Community Involvement, LCI1\_TX – LCI15\_TX

**Rewording of original scales:**

Item	GLSNZ Survey Item	Onyx & Bullen (2000) Item	Reason(s) for adapting item
LCI13_TX	Do you take the initiative to do what needs to be done even if no one asks you to?	At work, do you take the initiative to do what needs to be done even if no one asks you to?	As the respondents were still students at T0, we did not want to make this item inapplicable to students who had not yet worked in paid employment.

## Multidimensional Scale of Perceived Social Support (MSPSS)

**Appears as:** *Social Support* (under the wider heading *SECTION 5: HEALTH AND WELL-BEING*)

**Variable names begin with:** MSPSS

**Description:** These 12 questions assess the level of subjective social support from family, friends, and one's significant other.

**Scale Construction:** The 12 items divide into factor groups relating to the source of the social support:

Scale	Items
Family (4 items)	MSPSS3_TX, MSPSS4_TX, MSPSS8_TX, MSPSS11_TX
Friends (4 items)	MSPSS6_TX, MSPSS7_TX, MSPSS9_TX, MSPSS12_TX
Significant other (4 items)	MSPSS1_TX, MSPSS2_TX, MSPSS5_TX, MSPSS10_TX

**References:** The Multidimensional Scale of Perceived Social Support (MSPSS) was developed to assess subjective social support. The original scale contained 24 items from which 12 remained after factor analysis indicated that half of the items did not directly measure perceived social support. The 12 remaining items divide into 3 factor groups relating to the source of the support (family, friends, significant other), with 4 items in each group. The items in the GLSNZ survey were taken as-is from the 12 items of the MSPSS.

- Zimet, G. D., Dahlem, N.W, Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52, 30-41.
- Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 55, 610-617.
- Cauty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *American Journal of Community Psychology*, 28, 391-400.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	MSPSS1_TX, MSPSS2_TX, MSPSS3_TX, MSPSS4_TX, MSPSS5_TX, MSPSS6_TX, MSPSS7_TX, MSPSS8_TX, MSPSS9_TX, MSPSS10_TX, MSPSS11_TX, MSPSS12_TX	12		All items administered.
T1				
T2				
T3				

**Scoring:** Respondents indicate their agreement with each statement on 7-point Likert scales (Very strongly disagree = 1, Strongly disagree = 2, Mildly disagree = 3, Neutral = 4, Mildly agree = 5, Strongly agree = 6, Very strongly agree = 7). Sum items. Min score = 12, max score = 84. Higher scores indicate greater overall perceived social support. Calculate the *mean* of the items within each subscale (see Scale construction table above). Higher mean scores within each subscale indicate greater social support.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** Multidimensional Scale of Perceived Social Support, MSPSS1\_TX – MSPSS12\_TX

**Rewording of original scales:** N/A

## National/International Community Involvement (NCI)

**Appears as:** *National/International Community Involvement* (under the wider heading *SECTION 7: COMMUNITY INVOLVEMENT*)

**Variable names begin with:** NCI

**Description:** This item addresses the extent to which people are active members of national/international organisations.

**Scale construction:** N/A

**References:** This item was developed by the GLSNZ team in response to feedback from a pilot group of Pacific Islands students. The question was designed to mirror item LCI3\_TX with a focus on national/international community involvement rather than local community involvement.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	NCI1_TX	1		Item administered.
T1				
T2				
T3				

**Scoring:** Respondents indicate their answers on a 4-point Likert scale ranging from: No, not at all = 1 to Yes, very active = 4. Min score = 1, max score = 4. The higher the score, the higher the respondent's national/international community involvement.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** National/International Community Involvement, NCI1\_TX

**Rewording of original scales:** N/A

## Overall Impressions (OI)

**Appears as:** *Overall Impressions* (under the wider heading *SECTION 2: YOUR UNIVERSITY EXPERIENCE*)

**Variable names begin with:** OI

**Description:** These items assess respondents' overall experience at university and whether they would recommend their university to others.

**Scale construction:** N/A

### References:

**Item OI1\_TX:** Adapted from the Postgraduate Student Engagement Questionnaire (PSEQ). The PSEQ is the survey instrument for the Postgraduate Survey of Student Engagement (POSSE). The PSEQ is conducted as part of the Australian Council for Educational Research's (ACER) Australasian Survey of Student Engagement (AUSSE). The aim of the AUSSE is to assess students' engagement in university study to help institutions evaluate and improve the quality of education that students receive. The AUSSE was conducted for the first time in 2007, with 25 Australian and New Zealand universities taking part. In 2008, 29 institutions participated and in 2009, 35 institutions participated. The PSEQ is one of three surveys run by the AUSSE. The AUSSE also runs the Student Engagement Questionnaire (SEQ), which assesses first- and third-year undergraduate students' engagement and the Staff Student Engagement Questionnaire (SSEQ), which assesses staff perspectives on student engagement. The PSEQ is adapted from the SEQ to assess postgraduate students. It is completed online and takes around 15 minutes. The PSEQ was trialed in 2009 on a group of Australian universities and was offered to all institutions taking part in the AUSSE from 2010. The PSEQ contains six student engagement scales (Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning) and seven outcome measures (Higher-Order Thinking, General Learning Outcomes, General Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction). Data is also collected on individual demographics and educational contexts. Items OI1\_TX is adapted from one of the 'Overall Satisfaction' outcome measures.

- The Australian Council for Educational Research (ACER) (2010). *The Postgraduate Student Engagement Questionnaire (PSEQ) from the Postgraduate Survey of Student Engagement (POSSE): The Australasian Survey of Student Engagement (AUSSE)*. Retrieved February 18, 2011 from [http://ausse.acer.edu.au/images/docs/AUSSE\\_2010\\_POSSE.pdf](http://ausse.acer.edu.au/images/docs/AUSSE_2010_POSSE.pdf)

**Item OI2\_TX:** Pacific Islands pilot participants in 2011 suggested an item asking whether respondents would recommend their university to others as a measure of general satisfaction. The GLSNZ team designed the question and response options.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	OI1_TX, OI2_TX	2		All items administered.
T1				
T2				
T3				

**Scoring:**

**Item OI1\_TX:** Respondents indicate their answer on a 5-point Likert scale ranging from: Poor = 1 to Excellent = 5. Min score = 1, max score = 5. The higher the score, the more positive the respondent's experience at university.

**Item OI2\_TX:** Respondents indicate their answer on a 5-point Likert scale ranging from: Definitely no = 1 to Definitely yes = 5. Min score = 1, max score = 5. The higher the score, the more likely the respondent is to recommend their university to others.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** Overall Impressions, OI1\_TX – OI2\_TX

**Rewording of original scales:**

Item	GLSNZ Survey Item	PSEQ (2010) Item	Reason(s) for adapting item
OI1_TX	How would you evaluate your entire experience at your university?  Poor = 1 to Excellent = 5	How would you evaluate your entire educational experience at this institution?  Poor; Fair; Good; Excellent	The question was adapted so that the wording was consistent with other items in the survey. A 5-point Likert scale was used to record responses in the interests of consistency with other response options in the survey.

## Reflecting on Your University Experience (RUE)

**Appears as:** *Reflecting on Your University Experience* (under the wider heading *SECTION 2: YOUR UNIVERSITY EXPERIENCE*)

**Variable names begin with:** RUE

**Description:** This questionnaire was constructed to assess the importance respondents place on various aspects of their educational experience for enhancing graduates' employability and skills. The questionnaire consists of items from a variety of sources described below.

**Scale construction:** N/A

### References:

**Items RUE1\_TX, RUE2\_TX, RUE3\_TX, RUE4\_TX, RUE5\_TX, RUE6\_TX, RUE7\_TX, RUE9\_TX, RUE10\_TX:** Adapted from the Graduate Pathways Questionnaire (GPQ). The GPQ is the survey instruments for the Graduate Pathways Survey (GPS). The GPS was conducted by the Australian Council for Educational Research (ACER) in 2008. The GPS assessed all Australian domestic residents who had completed a bachelor degree in 2002. The aim of the GPS was to evaluate employment outcomes five years after graduates had completed their bachelor degrees, the way in which such outcomes changed over time, the paths graduates took on their way to these outcomes, and the variables that influenced these outcomes. Between July and October 2008, the GPQ was sent out to all Australian domestic residents who had completed a bachelor degree in 2002. A total of 9,238 graduates' responses were received (approximately 12% response rate). Information was collected on graduates' demographic and bachelor degree(s) and their education and employment activities one (2003), three (2005), and five (2008) years after graduation. The items in the GLSNZ survey were adapted from the bachelor degree(s) section of the GPQ. These items assess the extent to which respondents agree or disagree with a series of statements concerning ways in which their study programme could have been improved. Items were adapted so that the wording of the questions was better suited to Likert-scale response options (see 'Rewording of original scales' below). In addition, 5-point Likert scales (Low = 1 to High = 5) were used to record responses instead of the 3-item response set in the GPQ (Low, Medium, High) to maintain consistency with other response options in the survey.

- Coates, H., & Edwards, D. (2009). The 2008 graduate pathways survey: Graduates' education and employment outcomes five years after completion of a bachelor degree at an Australian university. *Higher Education Research*. Retrieved February 19, 2011 from [http://research.acer.edu.au/higher\\_education/12](http://research.acer.edu.au/higher_education/12)

**Item RUE8\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Lincoln University staff suggested a question examining the importance of practical or experiential learning (e.g., field trips or laboratories). The suggestion was submitted in



writing from Lincoln University to the GLSNZ team on 29 March 2011. The GLSNZ team constructed a question and accompanying response options to address the area of interest outlined by Lincoln University.

- Lincoln University (2011, March). Practical learning item. *Lincoln University's Comments on GLSNZ Questionnaire*.

**Items RUE11\_TX, RUE13\_TX, RUE15\_TX, RUE16\_TX, RUE18\_TX, RUE19\_TX:** Developed by the GLSNZ team to tap areas not covered by the other items in the section but deemed to be important aspects of university experience. The wording of the items followed the same format as the preceding items.

**Item RUE12\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining whether respondents' believe that enhanced use of technology and social media would have improved their study programme. The suggestion was submitted in a written report from Massey University to the GLSNZ team on 18 November 2010. The GLSNZ team constructed a question and accompanying response options to address the area of interest outlined by Massey University.

- Massey University (2010, November). Technology and social media item. *Feedback on the Graduate Longitudinal Study Draft Questionnaire Booklet*.

**Item RUE14\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Victoria University staff suggested a question examining the importance respondents place on preparation for employment in the international context. The suggestion was submitted via email from Victoria University to the GLSNZ team on 23 March 2011. The GLSNZ team constructed a question and accompanying response options to address the area of interest outlined by Victoria University.

- Victoria University of Wellington (2011, March). International employment market item. *Graduate Longitudinal Study New Zealand - Feedback to date*. Via email.

**Item RUE17\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining the importance respondents place on creative/innovative thinking. The suggestion was submitted in a written report from Massey University to the GLSNZ team on 9 March 2011. The GLSNZ team constructed a question and accompanying response options to address the area of interest outlined by Massey University.

- Massey University (2011, March). Creative/innovative thinking item. *Feedback on the Graduate Longitudinal Study Penultimate Draft Questionnaire*.

**Item RUE20\_TX:** Following the Maori consultation process with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining the importance of being able to meet the needs of Māori in one's chosen profession. The suggestion was

submitted electronically by Massey University staff on 20 July 2011. The GLSNZ team constructed a specific question and response options (to conform with other items in the questionnaire) in response to this suggestion.

- Massey University (2011, July). Meeting Needs of Māori item. *Email Communication*.

**Waves, N. of items, N. of cases:**

Wave	Items	N. of items	N. of cases	Notes
T0	RUE1_TX, RUE2_TX, RUE3_TX, RUE4_TX, RUE5_TX, RUE6_TX, RUE7_TX, RUE8_TX, RUE9_TX, RUE10_TX, RUE11_TX, RUE12_TX, RUE13_TX, RUE14_TX, RUE15_TX, RUE16_TX, RUE17_TX, RUE18_TX, RUE19_TX, RUE20_TX	20		All items administered.
T1				
T2				
T3				

**Scoring:** Respondents indicate the importance of each item on a 5-point Likert scale (Low = 1, High = 5). Min score = 20, max score = 100. Sum items. A higher score indicates greater importance of educational experience at university on graduate employability and skills.

**Recoding:** None.

**Psychometrics:**

**Items appear in Codebook in section:** Reflecting on Your Tertiary Experience, RUE1\_TX – RUE20\_TX

### Rewording of original scales:

Item	GLSNZ Survey Item	GPQ (2008) Item	Reason(s) for adapting item
RUE1_TX	Developing skills needed for professional practice.	Focus more on developing capabilities needed for professional success.	‘Capabilities’ changed to ‘skills’ to make the question clearer for students – suggestion from MoE (2011). ‘Success’ changed to ‘practice’ to generalise question.
RUE2_TX	Teaching foundation skills like reading, writing, speaking and problem-solving.	Have greater focus on skills like reading, writing, speaking and problem-solving.	‘Foundation’ added to make it clear that these are lower-level, basic skills.
RUE3_TX	High quality careers advice.	Enhance careers advice.	Use of ‘enhance’ is confusing – item reworded for greater clarity.
RUE4_TX	Supportive learning environments (e.g., mentorship, pastoral care).	Develop more supportive learning environments.	Examples added to assist respondents.
RUE5_TX	Fieldwork, placements and internships.	Introduce more fieldwork, placements and internships.	Wording changed to be less biased.
RUE6_TX	Lectures.	Have fewer lectures and more seminars, workshops and symposia.	Item split into 2 questions to be less biased and to assess the importance of each aspect rather than pitting each teaching style against the other. The terms used were also adapted to suit the New Zealand context.
RUE7_TX	Tutorials.		
RUE9_TX	Encouraging students to study specific areas of interest in greater depth.	Encourage students to study specific areas of interest in greater depth.	Present participle ‘ing’ used to conform with other items in the set.
RUE10_TX	Ensuring that teaching staff have current workplace experience and knowledge.	Ensure that teaching staff have current workplace experience and knowledge.	

## Satisfaction with University (SU)

**Appears as:** *Satisfaction with University* (under the wider heading *SECTION 2: YOUR UNIVERSITY EXPERIENCE*)

**Variable names begin with:** SU

**Description:** This questionnaire was constructed to assess respondents' satisfaction with university. Respondents are asked whether they are satisfied with: The careers advice they received, the online learning environment at their university, and the facilities and services available. They are also asked whether their study programme has been 'worth it,' whether their expectations have been met, whether they would like to retain links with their university, and how they evaluate their entire educational experience at university. The questionnaire consists of items from several sources described below.

### Scale construction:

Scale	Items
Careers advice (4 items)	SU1_TX, SU2_TX, SU3_TX, SU4_TX
Use of technology (8 items)	SU5_TX, SU6_TX, SU7_TX, SU8_TX, SU9_TX, SU10_TX, SU11_TX, SU12_TX
Satisfaction with services/facilities (13 items)	SU13_TX, SU14_TX, SU15_TX, SU16_TX, SU17_TX, SU18_TX, SU19_TX, SU20_TX, SU21_TX, SU22_TX, SU23_TX, SU24_TX, SU25_TX
General impressions (4 items)	SU26_TX, SU27_TX, SU28_TX, SU29_TX

### References:

**Items SU1\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining the extent to which respondents sought careers advice and what types of advice they sought. The suggestion was submitted in a written report from Massey University to the GLSNZ team on 18 November 2010. The GLSNZ team constructed a question addressing the area of interest outlined by Massey University and developed a set of response options.

- Massey University (2010, November). Careers advice item. *Feedback on the Graduate Longitudinal Study Draft Questionnaire Booklet*.

**Items SU2\_TX, SU3\_TX, SU4\_TX, SU5\_TX, SU6\_TX, SU7\_TX, SU8\_TX, SU9\_TX, SU10\_TX, SU11\_TX, SU12\_TX:** Adapted from the Postgraduate Student Engagement Questionnaire (PSEQ). The PSEQ is the survey instrument for the Postgraduate Survey of Student

Engagement (POSSE). The PSEQ is conducted as part of the Australian Council for Educational Research's (ACER) Australasian Survey of Student Engagement (AUSSE). The aim of the AUSSE is to assess students' engagement in university study to help institutions evaluate and improve the quality of education that students receive. The AUSSE was conducted for the first time in 2007, with 25 Australian and New Zealand universities taking part. In 2008, 29 institutions participated and in 2009, 35 institutions participated. The PSEQ is one of three surveys run by the AUSSE. The AUSSE also runs the Student Engagement Questionnaire (SEQ), which assesses first- and third-year undergraduate students' engagement and the Staff Student Engagement Questionnaire (SSEQ), which assesses staff perspectives on student engagement. The PSEQ is adapted from the SEQ to assess postgraduate students. It is completed online and takes around 15 minutes. The PSEQ was trialed in 2009 on a group of Australian universities and was offered to all institutions taking part in the AUSSE from 2010. The PSEQ contains six student engagement scales (Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning) and seven outcome measures (Higher-Order Thinking, General Learning Outcomes, General Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction). Data is also collected on individual demographics and educational contexts.

- The Australian Council for Educational Research (ACER) (2010). *The Postgraduate Student Engagement Questionnaire (PSEQ) from the Postgraduate Survey of Student Engagement (POSSE): The Australasian Survey of Student Engagement (AUSSE)*. Retrieved February 18, 2011 from [http://ausse.acer.edu.au/images/docs/AUSSE\\_2010\\_POSSE.pdf](http://ausse.acer.edu.au/images/docs/AUSSE_2010_POSSE.pdf)

**Items SU13\_TX, SU14\_TX, SU15\_TX, SU16\_TX, SU17\_TX, SU18\_TX, SU19\_TX, SU20\_TX, SU21\_TX, SU22\_TX, SU23\_TX, SU24\_TX, SU25\_TX, SU28\_T0:** Developed by the GLSNZ team. Items SU20\_TX, SU21\_TX, SU22\_TX, SU23\_TX, and SU24\_TX were developed in response to suggestions from Māori and Pacific Islands pilot participants in 2011.

**Item SU26\_TX:** Adapted from the Graduate Pathways Questionnaire (GPQ). The GPQ is the survey instrument for the Graduate Pathways Survey (GPS). The GPS was conducted by the Australian Council for Educational Research (ACER) in 2008. The GPS assessed all Australian domestic residents who had completed a bachelor degree in 2002. The aim of the GPS was to evaluate employment outcomes five years after graduates had completed their bachelor degrees, the way in which such outcomes changed over time, the paths graduates took on their way to these outcomes, and the variables that influenced these outcomes. Between July and October 2008, the GPQ was sent out to all Australian domestic residents who had completed a bachelor degree in 2002. A total of 9,238 graduates' responses were received (approximately 12% response rate). Information was collected on graduates' demographic and bachelor degree(s) and their education and employment activities one (2003), three (2005), and five (2008) years after graduation. Item SU26\_TX is adapted from the bachelor degree(s) section of the GPQ. This item assesses how worthwhile the respondent considers their study programme to have been.

- Coates, H., & Edwards, D. (2009). The 2008 graduate pathways survey: Graduates' education and employment outcomes five years after completion of a bachelor degree at an Australian university. *Higher Education Research*. Retrieved February 19, 2011 from [http://research.acer.edu.au/higher\\_education/12](http://research.acer.edu.au/higher_education/12)

**Item SU27\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Massey University staff suggested a question examining whether respondents' expectations of university have been met. The suggestion was submitted in a written report from Massey University to the GLSNZ team on 18 November 2010. The GLSNZ team constructed a question and accompanying response options addressing the area of interest outlined by Massey University.

- Massey University (2010, November). Expectation met item. *Feedback on the Graduate Longitudinal Study Draft Questionnaire Booklet*.

**Item SU29\_TX:** Following consultation with GLSNZ partners regarding the contents of the survey, Ministry of Education (MoE) staff suggested a question examining whether respondents' would like to retain social connections formed at university. The suggestion was submitted in a written report from the MoE to the GLSNZ team on 17 March 2011. The GLSNZ team constructed a question and accompanying response options addressing the area of interest outlined by the MoE.

- Ministry of Education (2011, March). Social connections item. *Ministry of Education comments on the draft GLSNZ questionnaire*.

#### Waves, N. of items, N. of cases:

Wave	Items	N. of items	N. of cases	Notes
T0	SU1_TX, SU2_TX, SU3_TX, SU4_TX, SU5_TX, SU6_TX, SU7_TX, SU8_TX, SU9_TX, SU10_TX, SU11_TX, SU12_TX, SU13_TX, SU14_TX, SU15_TX, SU16_TX, SU17_TX, SU18_TX, SU19_TX, SU20_TX, SU21_TX, SU22_TX, SU23_TX, SU24_TX, SU25_TX, SU26_TX, SU27_TX, SU28_TX, SU29_TX	29		All items administered.
T1				
T2				
T3				

#### Scoring:

**Item SU1\_TX:** Respondents indicate whether or not (yes, no) they sought careers advice at their university and, if so, the type of careers advice sought (open-field response).

**Item SU2\_TX:** Respondents indicate the source of careers advice (open-field response).

**Item SU3\_TX:** Respondents indicate the quality of careers advice received on a 4-item scale (Poor, Fair, Good, Excellent). Numerical values could be assigned to each response and coded so that higher scores indicate greater satisfaction.

**Item SU4\_TX:** Respondents indicate availability of careers advice on a 4-item scale (Poor, Fair, Good, Excellent). Numerical values could be assigned to each response and coded so that higher scores indicate greater availability.

**Items SU5\_TX, SU6\_TX, SU7\_TX, SU8\_TX, SU9\_TX:** Respondents indicate their answers on 4-point Likert scales with a 'Not applicable' option (1 = Never, 2 = Sometimes, 3 = Often, 4 = Very often). Min score = 5, max score = 20. A higher score indicates a greater use of online resources for university work.

**Item SU10\_TX:** Respondents indicate their answer on a 4-point Likert scale (1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much). Min score = 1, max score = 4. A higher score indicates greater emphasis on using computers in academic work at the respondent's university.

**Item SU11\_TX:** Respondents indicate their answer on a 4-point Likert scale (1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much). Min score = 1, max score = 4. A higher score indicates a greater perceived knowledge and skill of information technology due to experience at university.

**Item SU12\_TX:** Respondents indicate how much study they do online on a 4-item scale (None, About a quarter, About half, All or nearly all). Min score = 1, max score = 4. Numerical values could be assigned to each response and coded so that higher scores indicate greater proportion of study done online.

**Items SU13\_TX, SU14\_TX, SU15\_TX, SU16\_TX, SU17\_TX, SU18\_TX, SU19\_TX, SU20\_TX, SU21\_TX, SU22\_TX, SU23\_TX, SU24\_TX, SU25\_TX:** Respondents indicate their level of satisfaction on 5-point Likert scales (Not at all satisfied = 1, Not very satisfied = 2, Somewhat satisfied = 3, Very satisfied = 4, Extremely satisfied = 5) + additional 'N/A', 'Did not use' (eligible to use service/facility but chose not to use it), and 'Used external' (chose to use a service/facility that is not run by a university provider) options. Min score = 13, max score = 65. A higher score indicates greater satisfaction with facilities and services at university.

**Items SU26\_TX, SU27\_TX, SU28\_TX, SU29\_TX:** Respondents indicate their answers on 5-point Likert scales (Definitely no = 1, Definitely yes = 5). Min score = 4, max score = 20. A higher score indicates greater satisfaction with university experience.

**Means:**

**Items SU26\_TX, SU27\_TX:** Sum items. Min score = 3, max score = 15. A higher score indicates greater satisfaction with university experience.

**Items SU3\_TX, SU4\_TX:** Sum items. Min score = 2, max score = 8. A higher score indicates greater satisfaction with careers advice offered at university.

**Items SU5\_TX, SU6\_TX, SU7\_TX, SU8\_TX, SU9\_TX:** Sum items. Min score = 5, max score = 25. A higher score indicates greater use of technology for university studies.

**Items SU28\_TX, SU29\_TX:** Sum items. Min score = 2, max score = 10. A higher score indicated greater intention to retain formal and social links with one's university.

**Recoding:** None. Numerical values assigned to the non-numerical items should be scored in the same direction as the other items in the questionnaire.

**Psychometrics:**

**Items appear in Codebook in section:** Satisfaction with University, SU1\_TX – SU29\_TX



### Rewording of original scales:

Item	GLSNZ Survey Item	PSEQ (2010) Item	Reason(s) for adapting item
SU2_TX	Where did you seek careers advice from (e.g., careers advisor, tutors, academic advisor, web-based, career seminar)?	Overall, how would you evaluate the quality of careers advice that you have received from people outside university (e.g. employers, professional associations, personal networks etc.)?	Question adapted to evaluate quality of careers advice from <i>within</i> the institutes respondents attend as this was considered of greater interest and relevance than advice received from individuals outside the institute. The question was split into 3 questions assessing quality and availability as well as the source of the support for more fine-grained analysis.
SU3_TX	Overall, how would you evaluate the <u>quality</u> of careers advice that you have received at your university?		
SU4_TX	Overall, how would you evaluate the <u>availability</u> of careers advice that you have received at your university?		
SU5_TX	Asked questions or contributed to discussions online.	Asked questions or contributed to discussions in class or online.	Adapted to refer only to online learning context.
SU6_TX	Made an online presentation.	Made a class or online presentation.	
SU7_TX	Used library resources online.	Used library resources on campus or online.	
Item	GLSNZ Survey Item	GPQ (2008) Item	Reason(s) for adapting item
SU26_TX	Overall, has your study programme been worth the time, cost and effort?  Definitely no = 1 to Definitely yes = 5	Overall, was your bachelor degree study worth the cost, time and effort?  Definitely no; Probably no; Probably yes; Definitely yes	Wording changed from past tense to present tense given that respondents are still attending university at T0. Order that some of the words are presented in altered to reflect level of importance. A 5-point Likert scale was used to record responses in the interests of consistency with other response options in the survey.

**APPENDIX 4. GLSNZ CODE BOOK**

# Code Book

## Graduate Longitudinal Study New Zealand

**Programming Notes:**

Red text = programming notes.

General key for responses:

Male = 1, Female = 2

No = 0, Yes = 1

Don't know = 99

N/A = 88

Other = 77

Participant elects to skip question = 66

Questions that participants are ineligible to answer (see table below) = 88

There should be no blank cells for any question – every cell should contain either a value or string of text.

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## SECTION 1: GENERAL AND BACKGROUND INFORMATION

### General Demographics and University Details

We would like to begin by asking you some general questions about your background and your university enrolment details.

**GDUD1\_T0** 1. What is your date of birth? (dd/mm/yyyy)      \_\_ / \_\_ / \_\_\_\_

**GDUD2\_T0** 2. Are you?      1 = Male  
2 = Female

3. Which ethnic group(s) do you belong to? Please select the option(s) that apply to you.

		Not selected	Selected
<b>GDUD3a_T0</b>	New Zealand European	0	1
<b>GDUD3b_T0</b>	Māori	0	1
<b>GDUD3c_T0</b>	Samoa	0	1
<b>GDUD3d_T0</b>	Cook Islands Māori	0	1
<b>GDUD3e_T0</b>	Tongan	0	1
<b>GDUD3f_T0</b>	Niuean	0	1
<b>GDUD3g_T0</b>	Chinese	0	1
<b>GDUD3h_T0</b>	Indian	0	1
<b>GDUD3ot_T0</b>	Other (e.g., Dutch, Japanese, Tokelauan)	0	1

**GDUD3ota\_T0** If **GDUD3ot\_T0** = 1, please specify: \_\_\_\_\_

**GDUD4\_T0** 4. Are you of Māori descent (i.e., did you have a Māori birth parent, grandparent or great-grandparent, etc.)?      1 = Yes  
0 = No (**Go to GDUD6\_T0**)  
99 = Don't know (**Go to GDUD6\_T0**)

**GDUD5\_T0** 5. Do you know the name(s) of your iwi (tribe or tribes)?      1 = Yes  
0 = No (**Go to GDUD6\_T0**)

If **GDUD5\_T0** = 1, please select all that apply: (**Drop down boxes with regions then iwi**)

	Region	Iwi	Not selected	Selected
<b>GDUD5a1_T0</b>	<b>Te Tai Tokerau/</b>	Te Aupōuri	0	1
<b>GDUD5a2_T0</b>	<b>Tāmaki-makaurau</b>	Ngāti Kahu	0	1
<b>GDUD5a3_T0</b>	<b>(Northland/ Auckland)</b>	Te Kawerau	0	1
<b>GDUD5a4_T0</b>	<b>Region</b>	Ngāti Kurī	0	1
<b>GDUD5a5_T0</b>		Ngāpuhi	0	1
<b>GDUD5a6_T0</b>		Ngāpuhi ki Whaingaroa-Ngāti Kahu ki Whaingaroa	0	1
<b>GDUD5a7_T0</b>		Te Rarawa	0	1
<b>GDUD5a8_T0</b>		Te Roroa	0	1
<b>GDUD5a9_T0</b>		Ngāi Takoto	0	1
<b>GDUD5a10_T0</b>		Te Uri-o-Hau	0	1

			Not selected	Selected
GDUD5a11_T0		Ngāti Wai	0	1
GDUD5a12_T0		Ngāti Whātua	0	1
GDUD5b1_T0	<b>Hauraki (Coromandel) Region</b>	Ngāti Hako	0	1
GDUD5b2_T0		Ngāti Hei	0	1
GDUD5b3_T0		Ngāti Maru (Hauraki)	0	1
GDUD5b4_T0		Ngāti Paoa	0	1
GDUD5b5_T0		Patukirikiri	0	1
GDUD5b6_T0		Ngāti Porou ki Harataunga ki Mataora	0	1
GDUD5b7_T0		Ngāti Pūkenga ki Waiau	0	1
GDUD5b8_T0		Ngāti Rāhiri Tumutumu	0	1
GDUD5b9_T0		Ngāi Tai (Hauraki)	0	1
GDUD5b10_T0		Ngāti Tamaterā	0	1
GDUD5b11_T0		Ngāti Tara Tokanui	0	1
GDUD5b12_T0		Ngāti Whanaunga	0	1
GDUD5c1_T0	<b>Waikato/ Te Rohe Pōtae (Waikato/ King Country) Region</b>	Ngāti Haua (Waikato)	0	1
GDUD5c2_T0		Ngāti Maniapoto	0	1
GDUD5c3_T0		Ngāti Raukawa (Waikato)	0	1
GDUD5c4_T0		Waikato	0	1
GDUD5d1_T0	<b>Te Arawa/ Taupō (Rotorua/ Taupō) Region</b>	Ngāti Pikiao (Te Arawa)	0	1
GDUD5d2_T0		Ngāti Rangiteaorere (Te Arawa)	0	1
GDUD5d3_T0		Ngāti Rangitihi (Te Arawa)	0	1
GDUD5d4_T0		Ngāti Rangiwehi (Te Arawa)	0	1
GDUD5d5_T0		Ngāti Tahu-Ngāti Whaoa (Te Arawa)	0	1
GDUD5d6_T0		Tapuika (Te Arawa)	0	1
GDUD5d7_T0		Tarāwhai (Te Arawa)	0	1
GDUD5d8_T0		Tūhourangi (Te Arawa)	0	1
GDUD5d9_T0		Ngāti Tūwharetoa	0	1
GDUD5d10_T0		Uenuku-Kōpako (Te Arawa)	0	1
GDUD5d11_T0		Waitaha (Te Arawa)	0	1
GDUD5d12_T0		Ngāti Whakaue (Te Arawa)	0	1
GDUD5e1_T0	<b>Tauranga Moana/ Mātaatua (Bay of Plenty) Region</b>	Ngāti Awa	0	1
GDUD5e2_T0		Ngāti Manawa	0	1
GDUD5e3_T0		Ngāti Pūkenga	0	1
GDUD5e4_T0		Ngaiterangi	0	1
GDUD5e5_T0		Ngāti Ranginui	0	1
GDUD5e6_T0		Ngāi Tai (Tauranga Moana/ Mātaatua)	0	1
GDUD5e7_T0		Tūhoe	0	1
GDUD5e8_T0		Whakatōhea	0	1
GDUD5e9_T0		Te Whānau-a-Apanui	0	1
GDUD5e10_T0		Ngāti Whare	0	1
GDUD5f1_T0	<b>Taranaki Region</b>	Te Atiawa (Taranaki)	0	1
GDUD5f2_T0		Ngāti Maru (Taranaki)	0	1
GDUD5f3_T0		Ngāti Mutunga (Taranaki)	0	1
GDUD5f4_T0		Ngā Rauru	0	1

			Not selected	Selected
GDUD5f5_T0		Ngā Ruahine	0	1
GDUD5f6_T0		Pakakohi	0	1
GDUD5f7_T0		Ngāti Ruanui	0	1
GDUD5f8_T0		Ngāti Tama (Taranaki)	0	1
GDUD5f9_T0		Tangāhoe	0	1
GDUD5f10_T0		Taranaki	0	1
GDUD5g1_T0	<b>Te Tai Rāwhiti (East Coast) Region</b>	Te Aitanga-a-Māhaki	0	1
GDUD5g2_T0		Ngāti Porou	0	1
GDUD5g3_T0		Rongowhakaata	0	1
GDUD5g4_T0		Ngāi Tāmanuhiri	0	1
GDUD5h1_T0	<b>Te Matau-a-Māui/ Wairarapa (Hawke's Bay/ Wairarapa) Region</b>	Ngāti Kahungunu ki Heretaunga	0	1
GDUD5h2_T0		Ngāti Kahungunu ki Tamakinui-a-Rua	0	1
GDUD5h3_T0		Ngāti Kahungunu ki Tamatea	0	1
GDUD5h4_T0		Ngāti Kahungunu ki Te Wairoa	0	1
GDUD5h5_T0		Ngāti Kahungunu ki Wairarapa	0	1
GDUD5h6_T0		Ngāti Kahungunu ki Te Whanganui-a-Orotu	0	1
GDUD5h7_T0		Rangitāne (Te Matau-a-Māui/ Hawke's Bay/ Wairarapa)	0	1
GDUD5h8_T0		Rongomaiwahine (Te Māhia)	0	1
GDUD5h9_T0		Ngāti Pāhauwera	0	1
GDUD5h10_T0		Ngāti Rākaipaaka	0	1
GDUD5i1_T0	<b>Whanganui/ Rangitīkei (Wanganui/ Rangitīkei) Region</b>	Ngāti Apa (Rangitīkei)	0	1
GDUD5i2_T0		Te Ati Haunui-a-Pāpārangi	0	1
GDUD5i3_T0		Ngāti Haua (Taumarunui)	0	1
GDUD5i4_T0		Ngāti Hauiti	0	1
GDUD5j1_T0	<b>Manawatū/ Horowhenua/ Te Whanganui-a-Tara (Manawatū/ Horowhenua/ Wellington) Region</b>	Te Atiawa (Te Whanganui-a-Tara/ Wellington)	0	1
GDUD5j2_T0		Te Atiawa ki Whakarongotai	0	1
GDUD5j3_T0		Muaūpoko	0	1
GDUD5j4_T0		Rangitāne (Manawatū)	0	1
GDUD5j5_T0		Ngāti Kauwhata	0	1
GDUD5j6_T0		Ngāti Raukawa (Horowhenua/ Manawatū)	0	1
GDUD5j7_T0		Ngāti Toarangatira (Te Whanganui-a-Tara/ Wellington)	0	1
GDUD5j8_T0		Ngāti Tama ki Te Upoko o Te Ika (Te Whanganui-a-Tara/ Wellington)	0	1
GDUD5k1_T0	<b>Te Waipounamu/ Wharekauri (South Island/ Chatham Islands) Region</b>	Ngāti Apa ki Te Rā Tō	0	1
GDUD5k2_T0		Te Atiawa (Te Waipounamu/ South Island)	0	1
GDUD5k3_T0		Ngāti Koata	0	1
GDUD5k4_T0		Ngāti Kuia	0	1
GDUD5k5_T0		Kāti Māmoe	0	1



		Not selected	Selected
GDUD5k6_T0	Mori	0	1
GDUD5k7_T0	Ngāti Mutunga (Wharekauri/ Chatham Islands)	0	1
GDUD5k8_T0	Rangitāne (Te Waipounamu/ South Island)	0	1
GDUD5k9_T0	Ngāti Rārua	0	1
GDUD5k10_T0	Ngāi Tahu / Kāi Tahu	0	1
GDUD5k11_T0	Ngāti Tama (Te Waipounamu/ South Island)	0	1
GDUD5k12_T0	Ngāti Toarangatira (Te Waipounamu/ South Island)	0	1
GDUD5k13_T0	Waitaha (Te Waipounamu/ South Island)	0	1
GDUD5ot_T0	Other	0	1
GDUD5ota_T0	If GDUD5ot_T0 = 1, please specify: _____		
GDUD6_T0	6. What is your relationship status?	1 = Single 2 = In a relationship but not living together 3 = De facto (living together as a couple but not married to, or in a Civil Union with, one another) 4 = Married/Civil Union 5 = Divorced/Separated 6 = Widowed/Surviving Civil Union	
GDUD7_T0	7. Are you a parent?	1 = Yes 0 = No	
GDUD7a_T0	If GDUD7_T0 = 1, how many children do you have:	1 = 1 2 = 2 3 = 3 4 = 4 etc., to... 20 = 20	
GDUD8_T0	8. Which of the following describes your current living arrangements? Select the option that best applies to you.	1 = Living with friends or in a shared house 2 = Living with parents or guardians 3 = Living by myself 4 = Living with partner/spouse and/or children 5 = Living in a university hall or college of residence 77 = Other	
GDUD8ota_T0	If GDUD8_T0 = 77, please specify: _____		
GDUD9_T0	9. What was the <u>most recent</u> secondary school you attended before coming to university?		

<b>GDUD10_T0</b>	10. What is the highest level of education completed by your father/male caregiver?	1 = Did not attend secondary school 2 = Some or all of secondary school 3 = Vocational certificate or diploma (e.g., certificate in construction) 4 = Undergraduate university degree, certificate or diploma 5 = Postgraduate university degree, certificate or diploma 99 = Not sure 88 = N/A
<b>GDUD11_T0</b>	11. What is your father/male caregiver's current or most recent <u>main</u> occupation (e.g., schoolteacher, sales manager, homemaker)?	<b>(Open response)</b> 88 = N/A
<b>GDUD12_T0</b>	12. What is the highest level of education completed by your mother/female caregiver?	1 = Did not attend secondary school 2 = Some or all of secondary school 3 = Vocational certificate or diploma (e.g., certificate in construction) 4 = Undergraduate university degree, certificate or diploma 5 = Postgraduate university degree, certificate or diploma 99 = Not sure 88 = N/A
<b>GDUD13_T0</b>	13. What is your mother/female caregiver's current or most recent <u>main</u> occupation (e.g., school teacher, sales manager, home maker)?	<b>(Open response)</b> 88 = N/A
<b>GDUD14_T0</b>	14. Are you the first member of your immediate family to attend university?	1 = Yes 0 = No
<b>GDUD15_T0</b>	15. What is your residency status?	1 = New Zealand citizen/permanent resident 2 = Australian citizen/permanent resident 3 = International citizenship (i.e., do not have Australian or New Zealand permanent residency/ citizenship) 4 = Multiple citizenship (e.g., dual citizenship)
<b>GDUD15a_T0</b>	If <b>GDUD15_T0</b> = 3, please specify: _____	
<b>GDUD15b_T0</b>	If <b>GDUD15_T0</b> = 4, please specify: _____	
<b>GDUD16_T0</b>	16. Is English your first language?	1 = Yes <b>(go to GDUD20_T0)</b> 0 = No

**GDUD16a\_T0** If **GDUD16\_T0** = 0, please state your first language: \_\_\_\_\_

**GDUD17\_T0** 17. How fluent in English are you? Not at all fluent  
1      2      3      4      5  
Very fluent

**GDUD18\_T0** 18. Were you required to take a test of English as a foreign language for entrance into your university programme? 1 = Yes  
0 = No (go to **GDUD20\_T0**)

**GDUD18a\_T0** If **GDUD18\_T0** = 1 please specify, e.g., IELTS (International English Language Testing System), TOEFL (Test of English as Foreign Language), CertEAP (Certificate in English for Academic Purposes): \_\_\_\_\_

**GDUD19\_T0** 19. Do you regard this test as sufficient for success in a NZ university-level course? 1 = Yes  
0 = No

**GDUD20\_T0** 20. How fluent in Te Reo Māori are you? Not at all fluent  
1      2      3      4      5  
Very fluent

**GDUD21\_T0** 21. How fluent in sign language are you? Not at all fluent  
1      2      3      4      5  
Very fluent

22. Why did you choose the university you are currently attending? Select all those that apply.

		Not selected	Selected
<b>GDUD22a_T0</b>	Family connection	0	1
<b>GDUD22b_T0</b>	Talking to other students or graduates	0	1
<b>GDUD22c_T0</b>	Friends were attending the same university	0	1
<b>GDUD22d_T0</b>	The academic reputation of the university	0	1
<b>GDUD22e_T0</b>	The opportunity to work with a particular academic	0	1
<b>GDUD22f_T0</b>	The university offered the course/programme relevant to the career I sought to pursue	0	1
<b>GDUD22g_T0</b>	Costs (e.g., living, travel, fees)	0	1
<b>GDUD22h_T0</b>	Culturally appropriate programmes of study	0	1
<b>GDUD22i_T0</b>	Campus lifestyle	0	1
<b>GDUD22j_T0</b>	Good halls of residence	0	1
<b>GDUD22k_T0</b>	Good support systems (e.g. Māori, Pacific Island and International support)	0	1
<b>GDUD22l_T0</b>	Location	0	1
<b>GDUD22m_T0</b>	It was the nearest university	0	1
<b>GDUD22n_T0</b>	Advice from teacher/career adviser	0	1
<b>GDUD22o_T0</b>	University marketing (e.g., open days, advertisement)	0	1
<b>GDUD22p_T0</b>	Scholarship(s) availability	0	1
<b>GDUD22q_T0</b>	To enjoy new places	0	1
<b>GDUD22r_T0</b>	To meet new people	0	1
<b>GDUD22s_T0</b>	To increase independence	0	1
<b>GDUD22ot_T0</b>	Other	0	1

**GDUD22ota\_T0** If **GDUD22ot\_T0** = 1, please specify: \_\_\_\_\_

23. Please rank your **top 3** reasons for choosing the university you are currently attending, **numbering from 1 as the most important**. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

*Note: Items not selected in GDUD22\_T0 series to be assigned value of 88.*

		<u>Rank</u>
GDUD23a_T0	Family connection	
GDUD23b_T0	Talking to other students or graduates	
GDUD23c_T0	Friends were attending the same university	
GDUD23d_T0	The academic reputation of the university	
GDUD23e_T0	The opportunity to work with a particular academic	
GDUD23f_T0	The university offered the course/programme relevant to the career I sought to pursue	
GDUD23g_T0	Costs (e.g., living, travel, fees)	
GDUD23h_T0	Culturally appropriate programmes of study	
GDUD23i_T0	Campus lifestyle	
GDUD23j_T0	Good halls of residence	
GDUD23k_T0	Good support systems (e.g. Māori, Pacific Island and International support)	
GDUD23l_T0	Location	
GDUD23m_T0	It was the nearest university	
GDUD23n_T0	Advice from teacher/career adviser	
GDUD23o_T0	University marketing (e.g., open days, advertisement)	
GDUD23p_T0	Scholarship(s) availability	
GDUD23q_T0	To enjoy new places	
GDUD23r_T0	To meet new people	
GDUD23s_T0	To increase independence	
GDUD23ot_T0	Other	

24. Why did you choose your topic/field of study? Select all those that apply.

		<u>Not selected</u>	<u>Selected</u>
GDUD24a_T0	A strong interest in the topic/field	0	1
GDUD24b_T0	Wanted to pursue a career in this topic/field	0	1
GDUD24c_T0	To increase my earning potential	0	1
GDUD24d_T0	Lower course fees	0	1
GDUD24e_T0	Did not know what else to do (e.g., no career plans at the time)	0	1
GDUD24f_T0	No suitable alternative employment	0	1
GDUD24g_T0	Friend(s)/peer(s) were pursuing this topic/field	0	1
GDUD24h_T0	Recommendation of careers adviser and/or someone working in the field	0	1
GDUD24i_T0	Recommendation of teacher(s)	0	1
GDUD24j_T0	Family expectations	0	1
GDUD24ot_T0	Other	0	1

GDUD24ota\_T0 If GDUD24ot\_T0 = 1, please specify: \_\_\_\_\_

25. Please rank your **top 3** reasons for choosing your topic/field of study, **numbering from 1 as the most important**. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

*Note: Items not selected in GDUD24\_T0 series to be assigned value of 88.*

	<u>Rank</u>
GDUD25a_T0	A strong interest in the topic/field
GDUD25b_T0	Wanted to pursue a career in this topic/field
GDUD25c_T0	To increase my earning potential
GDUD25d_T0	Lower course fees
GDUD25e_T0	Did not know what else to do (e.g., no career plans at the time)
GDUD25f_T0	No suitable alternative employment
GDUD25g_T0	Friend(s)/peer(s) were pursuing this topic/field
GDUD25h_T0	Recommendation of careers adviser and/or someone working in the field
GDUD25i_T0	Recommendation of teacher(s)
GDUD25j_T0	Family expectations
GDUD25ot_T0	Other

## SECTION 2: YOUR UNIVERSITY EXPERIENCE

Now we would like to ask you some questions about your time at university in terms of your satisfaction, your views on the benefits of your university education and your academic beliefs. Firstly, we would like to know how satisfied you are with your study programme and your university's services and facilities.

### Satisfaction with University

- SU1\_T0** 1. Have you sought careers advice at your university? 1 = Yes  
0 = No (Go to **SU5\_T0**)
- SU1a\_T0** If **SU1\_T0** = 1, what type of careers advice did you need (e.g., course choice, further study, career decision making, job search, job application, skill set advice, marketing, etc.)? \_\_\_\_\_
- SU2\_T0** 2. Where did you seek careers advice from (e.g., careers advisor, tutors, academic advisor, web-based, career seminar)? \_\_\_\_\_
- SU3\_T0** 3. Overall, how would you evaluate the quality of careers advice that you have received at your university? 1 = Poor  
2 = Fair  
3 = Good  
4 = Excellent
- SU4\_T0** 4. Overall, how would you evaluate the availability of careers advice that you have received at your university? 1 = Poor  
2 = Fair  
3 = Good  
4 = Excellent

In your experience at your university during the current academic year, about how often have you done each of the following:

- 1 - Never  
2 - Sometimes  
3 - Often  
4 - Very often  
N/A – Not applicable

		Never		Very often		
		1	2	3	4	
<b>SU5_T0</b>	5. Asked questions or contributed to discussions online.	1	2	3	4	88 = N/A
<b>SU6_T0</b>	6. Made an online presentation.	1	2	3	4	88 = N/A
<b>SU7_T0</b>	7. Used library resources online.	1	2	3	4	88 = N/A
<b>SU8_T0</b>	8. Used an online learning system to discuss or complete an assignment.	1	2	3	4	88 = N/A
<b>SU9_T0</b>	9. Used email or an online learning forum to communicate with teaching staff.	1	2	3	4	88 = N/A

**Your choices for the following questions are:**

- 1 - Very little**
- 2 - Some**
- 3 - Quite a bit**
- 4 - Very much**

<b>SU10_T0</b>	10. To what extent does your university emphasise using computers in academic work?	Very little 1	2	Very much 3	4
<b>SU11_T0</b>	11. To what extent has your experience at this university contributed to your knowledge, skills, and personal development in using computing and information technology?	Very little 1	2	Very much 3	4
<b>SU12_T0</b>	12. How much of your course work and study do you do online?	1 = None 2 = About a quarter 3 = About half 4 = All or nearly all			

**Using the scale below, please rate how satisfied you have been, overall, with each of the following services or facilities provided by your University:**

- 1 - Not at all satisfied**
- 2 - Not very satisfied**
- 3 - Somewhat satisfied**
- 4 - Very satisfied**
- 5 - Extremely satisfied**
- N/A - Not applicable**

**Did not use – Eligible to use service/facility but chose not to use it**

**Used external – Chose to use a service/facility that is not run by a university provider**

<b>SU13_T0</b>	13. Administrative support services.	Not at all satisfied 1	2	3	Extremely satisfied 4	5	88 = N/A 55 = Did not use	44 = Used external
<b>SU14_T0</b>	14. Library facilities/services.	1	2	3	4	5	88 = N/A 55 = Did not use	44 = Used external
<b>SU15_T0</b>	15. Information technology facilities/services.	1	2	3	4	5	88 = N/A 55 = Did not use	44 = Used external
<b>SU16_T0</b>	16. Health and counselling facilities/services.	1	2	3	4	5	88 = N/A 55 = Did not use	44 = Used external
<b>SU17_T0</b>	17. Sport and recreation facilities/services.	1	2	3	4	5	88 = N/A 55 = Did not use	44 = Used external

		Not at all satisfied			Extremely satisfied		
		1	2	3	4	5	
<b>SU18_T0</b>	18. Study/work spaces.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU19_T0</b>	19. Campus buildings and environment.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU20_T0</b>	20. Cultural support facilities/services for Māori students.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU21_T0</b>	21. Cultural support facilities/services for Pasifika students.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU22_T0</b>	22. Cultural support facilities/services for International students.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU23_T0</b>	23. Disability support facilities/services.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU24_T0</b>	24. Childcare facilities/services.	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
<b>SU25_T0</b>	25. Spiritual support facilities/services (e.g., chaplains).	1	2	3	4	5	88 = N/A
		55 = Did not use			44 = Used external		
		Definitely no			Definitely yes		
		1	2	3	4	5	
<b>SU26_T0</b>	26. Overall, has your study programme been worth the time, cost and effort?	1	2	3	4	5	
<b>SU27_T0</b>	27. Has your overall experience at university met your expectations?	1	2	3	4	5	
<b>SU28_T0</b>	28. Would you like to retain links with your university (e.g., Alumni)?	1	2	3	4	5	
<b>SU29_T0</b>	29. Would you like to retain social connections formed at university (e.g., class reunions, keeping in touch with university friends)?	1	2	3	4	5	



### Reflecting on Your University Experience

**To make graduates more employable, what level of importance do you think your university should give to:**

		Low			High	
		1	2	3	4	5
<b>RUE1_T0</b>	1. Developing skills needed for professional practice.	1	2	3	4	5
<b>RUE2_T0</b>	2. Teaching foundation skills like reading, writing, speaking and problem-solving.	1	2	3	4	5
<b>RUE3_T0</b>	3. High quality careers advice.	1	2	3	4	5
<b>RUE4_T0</b>	4. Supportive learning environments (e.g., mentorship, pastoral care).	1	2	3	4	5
<b>RUE5_T0</b>	5. Fieldwork, placements and internships.	1	2	3	4	5
<b>RUE6_T0</b>	6. Lectures.	1	2	3	4	5
<b>RUE7_T0</b>	7. Tutorials.	1	2	3	4	5
<b>RUE8_T0</b>	8. Laboratories/experiential learning.	1	2	3	4	5
<b>RUE9_T0</b>	9. Encouraging students to study specific areas of interest in greater depth.	1	2	3	4	5
<b>RUE10_T0</b>	10. Ensuring that teaching staff have current workplace experience and knowledge.	1	2	3	4	5
<b>RUE11_T0</b>	11. Ensuring that teaching staff have current research experience and knowledge.	1	2	3	4	5
<b>RUE12_T0</b>	12. Proficient use of technology and social media.	1	2	3	4	5
<b>RUE13_T0</b>	13. Encouraging engagement between students and the community.	1	2	3	4	5
<b>RUE14_T0</b>	14. Preparation for employment in the international context.	1	2	3	4	5
<b>RUE15_T0</b>	15. Critical thinking and analysis.	1	2	3	4	5
<b>RUE16_T0</b>	16. Transferability of skills and knowledge.	1	2	3	4	5
<b>RUE17_T0</b>	17. Creative/innovative thinking.	1	2	3	4	5
<b>RUE18_T0</b>	18. Excellence in written and oral communication skills.	1	2	3	4	5
<b>RUE19_T0</b>	19. Research skills (e.g., finding, evaluating, and filtering sources of information).	1	2	3	4	5

RUE20_T0	20. Ability to meet the needs of Māori in your chosen profession.	Low			High	
		1	2	3	4	5

## Benefits of a University Education

**We would like to know how you believe your university education will benefit you in the future. Please rate the degree to which you think your university education has provided you with a good basis for the following:**

		Not at all	To a very high degree			
		1	2	3	4	5
<b>BUE1_T0</b>	1. Obtaining employment?	1	2	3	4	5
<b>BUE2_T0</b>	2. Performing work tasks?	1	2	3	4	5
<b>BUE3_T0</b>	3. Your career?	1	2	3	4	5
<b>BUE4_T0</b>	4. A good income?	1	2	3	4	5
<b>BUE5_T0</b>	5. Job security?	1	2	3	4	5
<b>BUE6_T0</b>	6. Geographic mobility, including moving overseas?	1	2	3	4	5
<b>BUE7_T0</b>	7. Engagement with community?	1	2	3	4	5
<b>BUE8_T0</b>	8. Being a role model (for education) within your own family or community?	1	2	3	4	5
<b>BUE9_T0</b>	9. Personal development?	1	2	3	4	5
<b>BUE10_T0</b>	10. Acceptance by others?	1	2	3	4	5
<b>BUE11_T0</b>	11. Status and respect?	1	2	3	4	5
<b>BUE12_T0</b>	12. Undertaking further study?	1	2	3	4	5
<b>BUE13_T0</b>	13. Developing entrepreneurial skills?	1	2	3	4	5
<b>BUE14_T0</b>	14. Developing leadership skills?	1	2	3	4	5
<b>BUE15_T0</b>	15. Enabling you to develop a secure identity?	1	2	3	4	5

## Academic Beliefs

The following statements and questions relate to your beliefs about your academic abilities and values. Please indicate how you feel about each statement or question.

		Strongly disagree					Strongly agree
<b>AB1_T0</b>	1. I really don't care what academic achievements say about my intellectual capacity.	1	2	3	4	5	6 7
<b>AB2_T0</b>	2. Academic achievement will not change my opinion of how intelligent I am.	1	2	3	4	5	6 7
<b>AB3_T0</b>	3. How I do academically has little relation to who I really am.	1	2	3	4	5	6 7
		Definitely false					Definitely true
<b>AB4_T0</b>	4. I enjoy doing work for most academic subjects.	1	2	3	4	5	6 7 8
<b>AB5_T0</b>	5. I like most academic subjects.	1	2	3	4	5	6 7 8
<b>AB6_T0</b>	6. I'm good at most academic subjects.	1	2	3	4	5	6 7 8
<b>AB7_T0</b>	7. I learn quickly in most academic subjects.	1	2	3	4	5	6 7 8
<b>AB8_T0</b>	8. I get good marks in most academic subjects.	1	2	3	4	5	6 7 8
		Not at all					Very well
<b>AB9_T0</b>	9. How well can you get lecturers/ tutors/ supervisors to help you when you get stuck on academic tasks?		1	2	3	4	5
<b>AB10_T0</b>	10. How well can you study when there are other interesting things to do?		1	2	3	4	5
<b>AB11_T0</b>	11. How well can you study for academic tests and exams?		1	2	3	4	5
<b>AB12_T0</b>	12. How well can you succeed in passing all your university courses?		1	2	3	4	5
<b>AB13_T0</b>	13. How well do you succeed in satisfying your lecturers/ supervisors in academic tasks?		1	2	3	4	5

## Overall Impressions

<b>OI1_T0</b>	1. How would you evaluate your entire experience at your university?	Poor			Excellent	
		1	2	3	4	5
<b>OI2_T0</b>	2. Would you recommend your university to others?	Definitely no			Definitely yes	
		1	2	3	4	5

### SECTION 3: ASPIRATIONS, GOALS AND VALUES

In this section we are interested in your career aspirations and plans for the future, as well as your personal goals, values and aspirations.

#### Future Plans and Career Aspirations

1. In the next two years do you intend to pursue a career (long term progression), a job (something immediate that will provide you with a wage), or pursue further study? Select all that apply.

		Not selected	Selected
<b>FPCA1a_T0</b>	Career	0	1
<b>FPCA1b_T0</b>	Job	0	1
<b>FPCA1c_T0</b>	Further study, please specify institution:	0	1
<b>FPCA1d_T0</b>	All of the above	0	1
<b>FPCA1ot_T0</b>	Other	0	1

**FPCA1ca\_T0** If **FPCA1c\_T0** = 1, please specify institution for further study (if not known at this stage, please type 'unknown'): \_\_\_\_\_

**FPCA1ota\_T0** If **FPCA1ot\_T0** = 1, please specify: \_\_\_\_\_

2. In the next two years do you plan to... Select all that apply.

		Not selected	Selected
<b>FPCA2a_T0</b>	Work in New Zealand	0	1
<b>FPCA2b_T0</b>	Work overseas	0	1
<b>FPCA2c_T0</b>	Work in your country of origin	0	1
<b>FPCA2d_T0</b>	None of the above	0	1

**FPCA2ba\_T0** If overseas (**FPCA2b\_T0** = 1), please specify where (if unsure where, write 'unknown'): \_\_\_\_\_

**FPCA2ca\_T0** If in your country of origin (**FPCA2c\_T0** = 1), please specify where: \_\_\_\_\_

3. If you are seeking employment in the next two years what area/field are you planning to seek employment in? Select all that apply.

		Not selected	Selected
<b>FPCA3_T0</b>	Not seeking employment in the next two years	0	1
<b>FPCA3a_T0</b>	Academia	0	1
<b>FPCA3b_T0</b>	Accounting	0	1
<b>FPCA3c_T0</b>	Administration and office support	0	1
<b>FPCA3d_T0</b>	Advertising	0	1
<b>FPCA3e_T0</b>	Animal welfare	0	1
<b>FPCA3f_T0</b>	Arts	0	1
<b>FPCA3g_T0</b>	Banking and financial services	0	1
<b>FPCA3h_T0</b>	Call centre and customer services	0	1
<b>FPCA3i_T0</b>	Community services and development	0	1
<b>FPCA3j_T0</b>	Construction	0	1

		Not selected	Selected
<b>FPCA3k_T0</b>	Consulting and strategy	0	1
<b>FPCA3l_T0</b>	Defence	0	1
<b>FPCA3m_T0</b>	Design and architecture	0	1
<b>FPCA3n_T0</b>	Education and training	0	1
<b>FPCA3o_T0</b>	Engineering	0	1
<b>FPCA3p_T0</b>	Environment and conservation	0	1
<b>FPCA3q_T0</b>	Farming and agriculture	0	1
<b>FPCA3r_T0</b>	Government	0	1
<b>FPCA3s_T0</b>	Health care and medical	0	1
<b>FPCA3t_T0</b>	Hospitality and tourism	0	1
<b>FPCA3u_T0</b>	Human resources and recruitment	0	1
<b>FPCA3v_T0</b>	Information and communication technology	0	1
<b>FPCA3w_T0</b>	Insurance and superannuation	0	1
<b>FPCA3x_T0</b>	Legal	0	1
<b>FPCA3y_T0</b>	Manufacturing	0	1
<b>FPCA3z_T0</b>	Marketing and communications	0	1
<b>FPCA3aa_T0</b>	Media	0	1
<b>FPCA3ab_T0</b>	Mining, resources and energy	0	1
<b>FPCA3ac_T0</b>	Real estate and property	0	1
<b>FPCA3ad_T0</b>	Retail and consumer products	0	1
<b>FPCA3ae_T0</b>	Sales	0	1
<b>FPCA3af_T0</b>	Science and technology	0	1
<b>FPCA3ag_T0</b>	Self employment	0	1
<b>FPCA3ah_T0</b>	Social work	0	1
<b>FPCA3ai_T0</b>	Sport and recreation	0	1
<b>FPCA3aj_T0</b>	Trades and services	0	1
<b>FPCA3ak_T0</b>	Transport and logistics	0	1
<b>FPCA3ot_T0</b>	Other	0	1

**FPCA3ota\_T0** If **FPCA3ot\_T0** = 1, please specify: \_\_\_\_\_

4. What are you looking for in a career/job? Please select all that apply.

		Not selected	Selected
<b>FPCA4a_T0</b>	Financial security	0	1
<b>FPCA4b_T0</b>	Job satisfaction	0	1
<b>FPCA4c_T0</b>	Opportunities for advancement	0	1
<b>FPCA4d_T0</b>	Flexibility	0	1
<b>FPCA4e_T0</b>	Opportunity to apply knowledge and skills	0	1
<b>FPCA4f_T0</b>	Opportunity to work with others	0	1
<b>FPCA4g_T0</b>	Opportunity to travel or have an overseas experience	0	1
<b>FPCA4h_T0</b>	Opportunity for further study	0	1
<b>FPCA4i_T0</b>	Earning potential	0	1
<b>FPCA4j_T0</b>	Location	0	1
<b>FPCA4k_T0</b>	Compatibility with workplace values	0	1
<b>FPCA4l_T0</b>	Status	0	1
<b>FPCA4m_T0</b>	Respect	0	1
<b>FPCA4n_T0</b>	Intellectual challenge and stimulation	0	1

		Not selected	Selected
<b>FPCA4o_T0</b>	Skill development	0	1
<b>FPCA4p_T0</b>	The opportunity to make a contribution/difference	0	1
<b>FPCA4q_T0</b>	Professional recognition	0	1
<b>FPCA4r_T0</b>	Job security	0	1
<b>FPCA4s_T0</b>	A good work/life balance	0	1
<b>FPCA4t_T0</b>	Meets family expectations	0	1
<b>FPCA4u_T0</b>	Accommodates caregiving roles (e.g., parenting, caring for elderly family member)	0	1
<b>FPCA4v_T0</b>	Ethical workplace	0	1
<b>FPCA4w_T0</b>	Culturally aware workplace	0	1
<b>FPCA4x_T0</b>	Environmentally aware workplace	0	1
<b>FPCA4y_T0</b>	Opportunity to contribute to Māori community	0	1
<b>FPCA4z_T0</b>	Opportunity to contribute to Pacific community	0	1
<b>FPCA4ot_T0</b>	Other	0	1

**FPCA4ota\_T0** If **FPCA4ot\_T0** = 1, please specify: \_\_\_\_\_

5. Please rank the **top 3** reasons that are important to you in terms of choosing a career/job, **numbering from 1 as the most important**. (If you selected one reason, please rank it as 1. If you selected two reasons, please rank them as 1 or 2 in order of importance)

*Note: Items not selected in **FPCA4\_T0** series to be assigned value of 88.*

		<u>Rank</u>
<b>FPCA5a_T0</b>	Financial security	
<b>FPCA5b_T0</b>	Job satisfaction	
<b>FPCA5c_T0</b>	Opportunities for advancement	
<b>FPCA5d_T0</b>	Flexibility	
<b>FPCA5e_T0</b>	Opportunity to apply knowledge and skills	
<b>FPCA5f_T0</b>	Opportunity to work with others	
<b>FPCA5g_T0</b>	Opportunity to travel or have an overseas experience	
<b>FPCA5h_T0</b>	Opportunity for further study	
<b>FPCA5i_T0</b>	Earning potential	
<b>FPCA5j_T0</b>	Location	
<b>FPCA5k_T0</b>	Compatibility with workplace values	
<b>FPCA5l_T0</b>	Status	
<b>FPCA5m_T0</b>	Respect	
<b>FPCA5n_T0</b>	Intellectual challenge and stimulation	
<b>FPCA5o_T0</b>	Skill development	
<b>FPCA5p_T0</b>	The opportunity to make a contribution/difference	
<b>FPCA5q_T0</b>	Professional recognition	
<b>FPCA5r_T0</b>	Job security	
<b>FPCA5s_T0</b>	A good work/life balance	
<b>FPCA5t_T0</b>	Meets family expectations	
<b>FPCA5u_T0</b>	Accommodates caregiving roles (e.g., parenting, caring for elderly family member)	
<b>FPCA5v_T0</b>	Ethical workplace	
<b>FPCA5w_T0</b>	Culturally aware workplace	
<b>FPCA5x_T0</b>	Environmentally aware workplace	
<b>FPCA5y_T0</b>	Opportunity to contribute to Māori community	



Rank

**FPCA5z\_T0** Opportunity to contribute to Pacific community  
**FPCA5ot\_T0** Other

6. Where would you like to be in 10 years time? Select all that apply.

		<b>Not selected</b>	<b>Selected</b>
<b>FPCA6a_T0</b>	In full-time employment	0	1
<b>FPCA6b_T0</b>	In part-time employment	0	1
<b>FPCA6c_T0</b>	Doing voluntary work	0	1
<b>FPCA6d_T0</b>	Establishing my career further	0	1
<b>FPCA6e_T0</b>	Engaging in further study	0	1
<b>FPCA6f_T0</b>	Living and working overseas	0	1
<b>FPCA6g_T0</b>	Self employed	0	1
<b>FPCA6h_T0</b>	Partnered/married	0	1
<b>FPCA6i_T0</b>	Parenting/caregiving	0	1
<b>FPCA6j_T0</b>	Retired	0	1
<b>FPCA6ot_T0</b>	Other	0	1

**FPCA6ota\_T0** If **FPCA6ot\_T0** = 1, please specify: \_\_\_\_\_

## Goals, Aspirations and Values

Please indicate how important each of the following are to you.

- 1 - Not at all important**  
**2 - Not very important**  
**3 - Somewhat important**  
**4 - Very important**  
**5 - Extremely important**

		Not at all important			Extremely important	
		1	2	3	4	5
<b>GAV1_T0</b>	1. Owning your own home?	1	2	3	4	5
<b>GAV2_T0</b>	2. Having a great deal of money?	1	2	3	4	5
<b>GAV3_T0</b>	3. Having a well-paid job?	1	2	3	4	5
<b>GAV4_T0</b>	4. Professional recognition?	1	2	3	4	5
<b>GAV5_T0</b>	5. Furthering your education?	1	2	3	4	5
<b>GAV6_T0</b>	6. Being entrepreneurial?	1	2	3	4	5
<b>GAV7_T0</b>	7. Giving everyone an equal chance in life?	1	2	3	4	5
<b>GAV8_T0</b>	8. Having a good reputation in the community?	1	2	3	4	5
<b>GAV9_T0</b>	9. Contributing to iwi/society?	1	2	3	4	5
<b>GAV10_T0</b>	10. Making a difference?	1	2	3	4	5
<b>GAV11_T0</b>	11. Working hard to get ahead?	1	2	3	4	5
<b>GAV12_T0</b>	12. Having a university education?	1	2	3	4	5
<b>GAV13_T0</b>	13. Improving the welfare of people in need?	1	2	3	4	5
<b>GAV14_T0</b>	14. Saving money for the future?	1	2	3	4	5
<b>GAV15_T0</b>	15. Being careful about what you spend?	1	2	3	4	5
<b>GAV16_T0</b>	16. Working ethically?	1	2	3	4	5
<b>GAV17_T0</b>	17. Contributing to environmental sustainability?	1	2	3	4	5
<b>GAV18_T0</b>	18. Being in good health?	1	2	3	4	5
<b>GAV19_T0</b>	19. Travelling?	1	2	3	4	5

		Not at all important		Extremely important		
		1	2	3	4	5
<b>GAV20_T0</b>	20. Being unselfish?	1	2	3	4	5
<b>GAV21_T0</b>	21. Having a family-friendly work/life balance?	1	2	3	4	5
<b>GAV22_T0</b>	22. Being culturally responsive?	1	2	3	4	5
<b>GAV23_T0</b>	23. Having a life-long partner?	1	2	3	4	5
<b>GAV24_T0</b>	24. Having a career rather than children?	1	2	3	4	5
<b>GAV25_T0</b>	25. Having children rather than a career?	1	2	3	4	5
<b>GAV26_T0</b>	26. Having children and a career?	1	2	3	4	5
<b>GAV27_T0</b>	27. Being a religious/spiritual person?	1	2	3	4	5
<b>GAV28_T0</b>	28. In general, how important are religious or spiritual beliefs in your day-to-day life?	1	2	3	4	5

## SECTION 4: EARNINGS AND ASSETS

### Earnings and Assets

Next we would like to ask you some general questions about your finances. We expect your earnings and assets to change over time and are interested in mapping those changes.

Please select the response that best describes your current financial situation.

**EA1\_T0** 1. Are you currently employed? 0 = No (go to **EA8\_T0**)  
1 = Yes, full-time  
2 = Yes, part-time  
3 = Yes, self-employed

2. What is your primary job? Please list your job title and employer.

**EA2pr1\_T0** Job title: \_\_\_\_\_

**EA2pr2\_T0** Employer (e.g., the company/institution that pays your wages): \_\_\_\_\_

**EA3\_T0** 3. How many hours per week do you work in your primary job? Total hours per week:

**EA4\_T0** 4. Thinking of your primary job, please list the main duties: (open-type text box)

**EA5\_T0** 5. Thinking about your primary job, what qualifications does a person need to do your job (either formal training or work experience can count)? (open-type text box)

**EA6\_T0** 6. How much is this work related to your field of study? 1 = Not at all  
2 = Very little  
3 = Some  
4 = Quite a bit  
5 = Very much

**EA7\_T0** 7. How much are you able to apply the skills you are gaining from your studies to your primary job (e.g., communication, analytical, teamwork, leadership, etc.)? 1 = Not at all  
2 = Very little  
3 = Some  
4 = Quite a bit  
5 = Very much

**EA8\_T0** 8. Please indicate your current total income per annum (include loans, scholarships and benefits etc.). 1 = Loss  
2 = Zero income  
3 = NZ\$1 - NZ\$5,000  
4 = NZ\$5,001 - NZ\$10,000  
5 = NZ\$10,001 - NZ\$15,000  
6 = NZ\$15,001 - NZ\$20,000  
7 = NZ\$20,001 - NZ\$25,000  
8 = NZ\$25,001 - NZ\$30,000  
9 = NZ\$30,001 - NZ\$35,000  
10 = NZ\$35,001 - NZ\$40,000

11 = NZ\$40,001 - NZ\$50,000  
 12 = NZ\$50,001 - NZ\$60,000  
 13 = NZ\$60,001 - NZ\$70,000  
 14 = NZ\$70,001 - NZ\$80,000  
 15 = NZ\$80,001 - NZ\$90,000  
 16 = NZ\$90,001 - NZ\$100,000  
 17 = NZ\$100,001 - NZ\$110,000  
 18 = NZ\$110,001 - NZ\$120,000  
 19 = NZ\$120,001 - NZ\$130,000  
 20 = NZ\$130,001 - NZ\$140,000  
 21 = NZ\$140,001 - NZ\$150,000  
 22 = NZ\$150,001 +  
 99 = Don't know

**EA9\_T0**

9. Approximately how much student loan debt do you have?

1 = Didn't take out a student loan  
 2 = Zero  
 3 = NZ\$1 - NZ\$5,000  
 4 = NZ\$5,001 - NZ\$10,000  
 5 = NZ\$10,001 - NZ\$15,000  
 6 = NZ\$15,001 - NZ\$20,000  
 7 = NZ\$20,001 - NZ\$25,000  
 8 = NZ\$25,001 - NZ\$30,000  
 9 = NZ\$30,001 - NZ\$35,000  
 10 = NZ\$35,001 - NZ\$40,000  
 11 = NZ\$40,001 - NZ\$50,000  
 12 = NZ\$50,001 - NZ\$60,000  
 13 = NZ\$60,001 - NZ\$70,000  
 14 = NZ\$70,001 - NZ\$80,000  
 15 = NZ\$80,001 - NZ\$90,000  
 16 = NZ\$90,001 - NZ\$100,000  
 17 = NZ\$100,001 +  
 99 = Don't know

**EA10\_T0**

10. Approximately how much other debt do you have (e.g., overdrafts, hire purchases, mortgage, credit card, other loans)?

1 = Zero  
 2 = NZ\$1 - NZ\$5,000  
 3 = NZ\$5,001 - NZ\$10,000  
 4 = NZ\$10,001 - NZ\$15,000  
 5 = NZ\$15,001 - NZ\$20,000  
 6 = NZ\$20,001 - NZ\$25,000  
 7 = NZ\$25,001 - NZ\$30,000  
 8 = NZ\$30,001 - NZ\$35,000  
 9 = NZ\$35,001 - NZ\$40,000  
 10 = NZ\$40,001 - NZ\$50,000  
 11 = NZ\$50,001 - NZ\$60,000  
 12 = NZ\$60,001 - NZ\$70,000  
 13 = NZ\$70,001 - NZ\$80,000  
 14 = NZ\$80,001 - NZ\$90,000  
 15 = NZ\$90,001 - NZ\$100,000  
 16 = NZ\$100,001 +  
 99 = Don't know

<b>EA11_T0</b>	11. Do you currently have any other <u>significant regular</u> financial commitments per annum (e.g., child care, kinship care (elderly relative, family overseas), child support, school fees, contributions to charitable organisations, church, religious organisations)? If yes, please specify how many significant regular financial commitments you have.	0 = No ( <b>go to EA12_T0</b> ) 1 = Yes, 1 2 = Yes, 2 3 = Yes, 3 4 = Yes, 4 etc., to... 10 = Yes, 10
<b>EA11a_T0</b>	Please specify the total annual amount. ( <b>drop down menu</b> )	1 = NZ\$1 - NZ\$5,000 2 = NZ\$5,001 - NZ\$10,000 3 = NZ\$10,001 - NZ\$15,000 4 = NZ\$15,001 - NZ\$20,000 5 = NZ\$20,001 - NZ\$25,000 6 = NZ\$25,001 - NZ\$30,000 7 = NZ\$30,001 - NZ\$35,000 8 = NZ\$35,001 - NZ\$40,000 9 = NZ\$40,001 - NZ\$50,000 10 = NZ\$50,001 - NZ\$60,000 11 = NZ\$60,001 - NZ\$70,000 12 = NZ\$70,001 - NZ\$80,000 13 = NZ\$80,001 - NZ\$90,000 14 = NZ\$90,001 - NZ\$100,000 15 = NZ\$100,001 - NZ\$250,000 16 = NZ\$250,001 - NZ\$500,000 17 = NZ\$500,001 + 99 = Don't know
<b>EA12_T0</b>	12. What is the approximate total value of your assets (e.g., savings, iPod, furniture, personal computer, car, house)?	1 = Zero 2 = NZ\$1 - NZ\$5,000 3 = NZ\$5,001 - NZ\$10,000 4 = NZ\$10,001 - NZ\$15,000 5 = NZ\$15,001 - NZ\$20,000 6 = NZ\$20,001 - NZ\$25,000 7 = NZ\$25,001 - NZ\$30,000 8 = NZ\$30,001 - NZ\$35,000 9 = NZ\$35,001 - NZ\$40,000 10 = NZ\$40,001 - NZ\$50,000 11 = NZ\$50,001 - NZ\$60,000 12 = NZ\$60,001 - NZ\$70,000 13 = NZ\$70,001 - NZ\$80,000 14 = NZ\$80,001 - NZ\$90,000 15 = NZ\$90,001 - NZ\$100,000 16 = NZ\$100,001 - NZ\$250,000 17 = NZ\$250,001 - NZ\$500,000 18 = NZ\$500,001 + 99 = Don't know

**Please think about how you feel about your current financial situation. Indicate how much you agree or disagree with each statement.**

**1 - Strongly disagree**

**2 - Disagree**

**3 - Neutral/mixed**

**4 - Agree**

**5 - Strongly agree**

		Strongly disagree			Strongly agree	
		1	2	3	4	5
<b>EA13_T0</b>	13. I have enough money to afford the accommodation I need.					
<b>EA14_T0</b>	14. I have enough money to afford the clothing I need.					
<b>EA15_T0</b>	15. I have enough money to afford the food I need.					
<b>EA16_T0</b>	16. I have enough money to afford the leisure and recreational activities I want.					
<b>EA17_T0</b>	17. Over the past 12 months I have had difficulty meeting my financial commitments.					

## SECTION 5: HEALTH AND WELL-BEING

### General Health

We would now like to ask a few questions regarding your general health and well-being.

- |                |  |   |             |   |           |  |           |  |   |   |   |   |   |  |
|----------------|--|---|-------------|---|-----------|--|-----------|--|---|---|---|---|---|--|
| <b>GH1_T0</b>  | 1. How would you rate your overall physical health?  | 1 = Poor<br>2 = Fair<br>3 = Good<br>4 = Very good<br>5 = Excellent                    |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH2_T0</b>  | 2. Do you have a long-term medical condition, impairment or disability?  | 0 = No (go to <b>GH4_T0</b> )<br>1 = Yes  |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH2a_T0</b> | If <b>GH2_T0</b> = 1, please specify: (open field) _____   |   |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH3_T0</b>  | 3. Has your condition, impairment or disability affected your studies and/or work?   | 0 = No (go to <b>GH4_T0</b> )<br>1 = Yes  |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH3a_T0</b> | If <b>GH3_T0</b> = 1, please specify the extent to which it has affected your studies and/or work: <table border="0" style="margin-left: 20px;"> <tr> <td></td> <td style="text-align: center;">Very little</td> <td></td> <td></td> <td></td> <td style="text-align: center;">Very much</td> </tr> <tr> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table> |   | Very little |   |           |  | Very much |  | 1 | 2 | 3 | 4 | 5 |  |
|                | Very little  |   |             |   | Very much |  |           |  |   |   |   |   |   |  |
|                | 1  | 2   | 3           | 4 | 5         |  |           |  |   |   |   |   |   |  |
| <b>GH4_T0</b>  | 4. To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries or moving a chair?  | 1 = Not at all<br>2 = A little<br>3 = Moderately<br>4 = Mostly<br>5 = Completely      |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH5_T0</b>  | 5. Does your health limit you in doing vigorous activities, such as running, lifting heavy objects, participating in strenuous sports?   | 1 = Cannot do<br>2 = Quite a lot<br>3 = Somewhat<br>4 = Very little<br>5 = Not at all |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH6_T0</b>  | 6. In the last 12 months, have you smoked at least 1 cigarette each day for a month or more?   | 0 = No (go to <b>GH8_T0</b> )<br>1 = Yes  |             |   |           |  |           |  |   |   |   |   |   |  |
| <b>GH7_T0</b>  | 7. How many cigarettes do you typically smoke each day?  | 0 = 0<br>1 = 1<br>2 = 2<br>3 = 3<br>4 = 4<br>etc., to...<br>40 = 40+                  |             |   |           |  |           |  |   |   |   |   |   |  |



GH8\_T0

8. How often do you have a drink containing alcohol?

1 = Never (go to next section)  
 2 = Almost never  
 3 = Less than once a month  
 4 = Once a month  
 5 = Once every two weeks  
 6 = Once a week  
 7 = Two or three times a week  
 8 = Four or five times a week  
 9 = Six or seven times a week

GH9\_T0

9. How many standard drinks containing alcohol do you have on a typical day when you are drinking?

1 = 1  
 2 = 2  
 3 = 3  
 4 = 4  
 etc., to...  
 25 = 25+



GH10\_T0

10. How often do you have six or more standard drinks on one occasion?

1 = Never  
 2 = Once or twice a year  
 3 = Less than monthly  
 4 = Monthly  
 5 = Weekly  
 6 = Daily or almost daily

### General Feelings

Below are some statements about feelings and thoughts. Please select the option that best describes your experience of each of these over the last 2 weeks.

- 1 - None of the time
- 2 - Rarely
- 3 - Some of the time
- 4 - Often
- 5 - All of the time

		None of the time			All of the time	
		1	2	3	4	5
<b>GF1_T0</b>	1. I've been feeling optimistic about the future.	1	2	3	4	5
<b>GF2_T0</b>	2. I've been feeling useful.	1	2	3	4	5
<b>GF3_T0</b>	3. I've been feeling relaxed.	1	2	3	4	5
<b>GF4_T0</b>	4. I've been feeling interested in other people.	1	2	3	4	5
<b>GF5_T0</b>	5. I've had energy to spare.	1	2	3	4	5
<b>GF6_T0</b>	6. I've been dealing with problems well.	1	2	3	4	5
<b>GF7_T0</b>	7. I've been thinking clearly.	1	2	3	4	5
<b>GF8_T0</b>	8. I've been feeling good about myself.	1	2	3	4	5
<b>GF9_T0</b>	9. I've been feeling close to other people.	1	2	3	4	5
<b>GF10_T0</b>	10. I've been feeling confident.	1	2	3	4	5
<b>GF11_T0</b>	11. I've been able to make up my own mind about things.	1	2	3	4	5
<b>GF12_T0</b>	12. I've been feeling loved.	1	2	3	4	5
<b>GF13_T0</b>	13. I've been interested in new things.	1	2	3	4	5
<b>GF14_T0</b>	14. I've been feeling cheerful.	1	2	3	4	5

Below is a list of statements dealing with your general feelings about yourself. Please indicate how much you agree or disagree with each statement. Your choices are:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Agree
- 4 - Strongly agree

		Strongly disagree		Strongly agree	
		1	2	3	4
<b>GF15_T0</b>	15. On the whole, I am satisfied with myself.				
<b>GF16_T0</b>	16. I feel that I have a number of good qualities.				
<b>GF17_T0</b>	17. I am able to do things as well as most other people.				
<b>GF18_T0</b>	18. I feel that I'm a good person of worth, at least on an equal plane with others.				
<b>GF19_T0</b>	19. I take a positive attitude toward myself.				

Please indicate/rate the extent to which the following statements apply to you.

Your choices are:

- 1 – Not at all true
- 2 – Hardly true
- 3 – Moderately true
- 4 – Exactly true

		Not at all true		Exactly true	
		1	2	3	4
<b>GF20_T0</b>	20. I am confident that I could deal efficiently with unexpected events.				
<b>GF21_T0</b>	21. Thanks to my resourcefulness, I know how to handle unforeseen situations.				
<b>GF22_T0</b>	22. I can remain calm when facing difficulties because I can rely on my coping abilities.				
<b>GF23_T0</b>	23. If I am in trouble, I can usually think of a solution.				
<b>GF24_T0</b>	24. I can usually handle whatever comes my way.				

### Social Support

We are interested in how you feel about the following statements. Read each statement carefully. Please indicate how you feel about each statement.

Your choices are:

- 1 - Very Strongly Disagree
- 2 - Strongly Disagree
- 3 - Mildly Disagree
- 4 - Neutral
- 5 - Mildly Agree
- 6 - Strongly Agree
- 7 - Very Strongly Agree

		Very strongly disagree				Very strongly agree		
		1	2	3	4	5	6	7
<b>MSPSS1_T0</b>	1. There is a special person who is around when I am in need.							
<b>MSPSS2_T0</b>	2. There is a special person with whom I can share my joys and sorrows.							
<b>MSPSS3_T0</b>	3. My family really tries to help me.							
<b>MSPSS4_T0</b>	4. I get the emotional help and support I need from my family.							
<b>MSPSS5_T0</b>	5. I have a special person who is a real source of comfort to me.							
<b>MSPSS6_T0</b>	6. My friends really try to help me.							
<b>MSPSS7_T0</b>	7. I can count on my friends when things go wrong.							
<b>MSPSS8_T0</b>	8. I can talk about my problems with my family.							
<b>MSPSS9_T0</b>	9. I have friends with whom I can share my joys and sorrows.							
<b>MSPSS10_T0</b>	10. There is a special person in my life who cares about my feelings.							
<b>MSPSS11_T0</b>	11. My family is willing to help me make decisions.							
<b>MSPSS12_T0</b>	12. I can talk about my problems with my friends.							

## SECTION 6: PERSONAL CHARACTERISTICS

### Personal Characteristics

Below are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please select an option to indicate the extent to which you agree or disagree with that statement.

- 1 - Disagree strongly
- 2 - Disagree a little
- 3 - Neither agree nor disagree
- 4 - Agree a little
- 5 - Agree strongly

I see myself as someone who...

		Disagree strongly			Agree strongly	
		1	2	3	4	5
<b>BFI1_T0</b>	1. Is talkative.	1	2	3	4	5
<b>BFI2_T0</b>	2. Tends to find fault with others.	1	2	3	4	5
<b>BFI3_T0</b>	3. Does a thorough job.	1	2	3	4	5
<b>BFI4_T0</b>	4. Is depressed, blue.	1	2	3	4	5
<b>BFI5_T0</b>	5. Is original, comes up with new ideas.	1	2	3	4	5
<b>BFI6_T0</b>	6. Is reserved.	1	2	3	4	5
<b>BFI7_T0</b>	7. Is helpful and unselfish with others.	1	2	3	4	5
<b>BFI8_T0</b>	8. Can be somewhat careless.	1	2	3	4	5
<b>BFI9_T0</b>	9. Is relaxed, handles stress well.	1	2	3	4	5
<b>BFI10_T0</b>	10. Is curious about many different things.	1	2	3	4	5
<b>BFI11_T0</b>	11. Is full of energy.	1	2	3	4	5
<b>BFI12_T0</b>	12. Starts quarrels with others.	1	2	3	4	5
<b>BFI13_T0</b>	13. Is a reliable worker.	1	2	3	4	5
<b>BFI14_T0</b>	14. Can be tense.	1	2	3	4	5
<b>BFI15_T0</b>	15. Is ingenious, a deep thinker.	1	2	3	4	5
<b>BFI16_T0</b>	16. Generates a lot of enthusiasm.	1	2	3	4	5
<b>BFI17_T0</b>	17. Has a forgiving nature.	1	2	3	4	5

		Disagree strongly			Agree strongly	
		1	2	3	4	5
<b>BFI18_T0</b>	18. Tends to be disorganised.	1	2	3	4	5
<b>BFI19_T0</b>	19. Worries a lot.	1	2	3	4	5
<b>BFI20_T0</b>	20. Has an active imagination.	1	2	3	4	5
<b>BFI21_T0</b>	21. Tends to be quiet.	1	2	3	4	5
<b>BFI22_T0</b>	22. Is generally trusting.	1	2	3	4	5
<b>BFI23_T0</b>	23. Tends to be lazy.	1	2	3	4	5
<b>BFI24_T0</b>	24. Is emotionally stable, not easily upset.	1	2	3	4	5
<b>BFI25_T0</b>	25. Is inventive.	1	2	3	4	5
<b>BFI26_T0</b>	26. Has an assertive personality.	1	2	3	4	5
<b>BFI27_T0</b>	27. Can be cold and aloof.	1	2	3	4	5
<b>BFI28_T0</b>	28. Perseveres until the task is finished.	1	2	3	4	5
<b>BFI29_T0</b>	29. Can be moody.	1	2	3	4	5
<b>BFI30_T0</b>	30. Values artistic, aesthetic experiences.	1	2	3	4	5
<b>BFI31_T0</b>	31. Is sometimes shy, inhibited.	1	2	3	4	5
<b>BFI32_T0</b>	32. Is considerate and kind to almost everyone.	1	2	3	4	5
<b>BFI33_T0</b>	33. Does things efficiently.	1	2	3	4	5
<b>BFI34_T0</b>	34. Remains calm in tense situations.	1	2	3	4	5
<b>BFI35_T0</b>	35. Prefers work that is routine.	1	2	3	4	5
<b>BFI36_T0</b>	36. Is outgoing, sociable.	1	2	3	4	5
<b>BFI37_T0</b>	37. Is sometimes rude to others.	1	2	3	4	5
<b>BFI38_T0</b>	38. Makes plans and follows through with them.	1	2	3	4	5
<b>BFI39_T0</b>	39. Gets nervous easily.	1	2	3	4	5
<b>BFI40_T0</b>	40. Likes to reflect, play with ideas.	1	2	3	4	5
<b>BFI41_T0</b>	41. Has few artistic interests.	1	2	3	4	5
<b>BFI42_T0</b>	42. Likes to cooperate with others.	1	2	3	4	5

		Disagree strongly			Agree strongly	
		1	2	3	4	5
<b>BFI43_T0</b>	43. Is easily distracted.					
<b>BFI44_T0</b>	44. Is sophisticated in art, music, or literature.					

## SECTION 7: COMMUNITY INVOLVEMENT

### Local Community Involvement

**These questions ask about your participation in your local community, that is, where you are living now. Please choose the option that best indicates your level of community involvement.**

		No, not at all			Yes, often (at least once a week)
<b>LCI1_T0</b>	1. Do you help out a local group as a volunteer (e.g., marae, kōhanga reo, Girl Guides, Lifeline, kindergarten)?	1	2	3	4
<b>LCI2_T0</b>	2. Have you attended a local community event in the past 6 months (e.g., church fair, school concert, craft exhibition)?	No, not at all 1	2	3	Yes, several (at least 3) 4
<b>LCI3_T0</b>	3. Are you an active member of a local organisation or club (e.g., church, sport, marae committee, craft, social club)?	No, not at all 1	2	3	Yes, very active 4
<b>LCI4_T0</b>	4. Are you on a management committee or organising committee for any local group or organisation (e.g., marae organisation, play centre)?	No, not at all 1	2	3	Yes, several (at least 3) 4
<b>LCI5_T0</b>	5. In the past 3 years, have you ever joined a local community action to deal with an emergency?	No, not at all 1	2	3	Yes, frequently (at least 5 times) 4
<b>LCI6_T0</b>	6. In the past 3 years, have you ever taken part in a local community project?	No, not at all 1	2	3	Yes, frequently (at least 3 times) 4
<b>LCI7_T0</b>	7. Have you ever been part of a project to organise a new service in your area (e.g., youth club, Scout hall, child care, recreation for disabled)?	No, not at all 1	2	3	Yes, several times (at least 3) 4
<b>LCI8_T0</b>	8. Have you ever picked up other people's rubbish in a public place?	No, never 1	2	3	Yes, frequently 4



<b>LCI9_T0</b>	9. Do you go outside your local community to visit your family?	No, not much 1	2	Yes, nearly always 3	4
<b>LCI10_T0</b>	10. If you need information to make a life decision, do you know where to find that information?	No, not at all 1	2	Yes, definitely 3	4
<b>LCI11_T0</b>	11. If you disagree with what everyone else agreed on, would you feel free to speak out?	No, not at all 1	2	Yes, definitely 3	4
<b>LCI12_T0</b>	12. If you have a dispute with your neighbours (e.g., over fences or dogs) are you willing to seek mediation?	No, not at all 1	2	Yes, definitely 3	4
<b>LCI13_T0</b>	13. Do you take the initiative to do what needs to be done even if no one asks you to?	No, not at all 1	2	Yes, definitely 3	4
<b>LCI14_T0</b>	14. Do you think that multiculturalism makes life in your area better?	No, not at all 1	2	Yes, definitely 3	4
<b>LCI15_T0</b>	15. Do you enjoy living among people of different lifestyles?	No, not at all 1	2	Yes, definitely 3	4

### National/International Community Involvement

**This question asks about your involvement in national or international organisations. Please choose the option that best indicates your level of involvement.**

		No, not at all		Yes, very active	
		1	2	3	4
NCI1_T0	1. Are you an active member of a national/international organisation (e.g., Red Cross, Search and Rescue, Greenpeace, Amnesty International, World Vision)?				

## SECTION 8: SUCCESS FACTORS

### Success Factors

**You are almost finished. The last thing we would like to ask you is if there are any key factors that have hindered or helped the completion of your qualification.**

**FS1\_T0**      1. Are there any key factors that hindered the completion of your qualification?      0 = No  
1 = Yes

**FS1a\_T0**      If **FS1\_T0** = 1, please specify: \_\_\_\_\_

**FS2\_T0**      2. Are there any key factors that helped the completion of your qualification?      0 = No  
1 = Yes

**FS2a\_T0**      If **FS2\_T0** = 1, please specify: \_\_\_\_\_

## SECTION 9: GENERAL COMMENTS AND CONTACT DETAILS

### General Comments

**If there is anything else you would like to mention about the survey or the study that you feel is important, please write it below:**

**GC\_T0** (Open response)

Contact details section to come after thank you statement, etc., and not linked with responses to rest of survey.

**APPENDIX 5. GLSNZ PROJECT DEVELOPMENT, POLICIES AND PROCEDURES**

# Project Development, Policies and Procedures

## Graduate Longitudinal Study New Zealand

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## SECTION 1: Background to the Graduate Longitudinal Study NZ

### Introduction

The Graduate Longitudinal Study New Zealand (GLSNZ) was commissioned by the Tertiary Education Commission and aims to understand the value of a New Zealand tertiary education by exploring how graduates fare in the years following university, in terms of their lifestyles, employment, career development, and their health and well-being. It replaces the 35-year-old Graduate Destinations Survey that questioned all New Zealand university graduates about their employment outcomes six months after graduation.

### The Graduate Destination Survey

The Graduate Destination Survey, undertaken annually from 1973 until 2007, asked all New Zealand university graduates from the previous year about their employment outcomes in the period following graduation. Recently, the survey suffered from low response rates (National average over 2004, 2005 and 2006 was 29.2%) and did not address a broad range of questions that universities increasingly wished to ask of their graduates. Its value was also limited by the fact that it only surveyed graduates once in the year after their graduation.

In 2008, a strategic review of the Graduate Destination Survey was collectively undertaken by the universities under the auspices of the New Zealand Vice-Chancellors' Committee (NZVCC). This review led to a decision by the NZVCC that the existing survey be discontinued, and a longitudinal study instituted as its successor.

### The National Centre for Lifecourse Research

The National Centre for Lifecourse Research (NCLR), based at the University of Otago, was selected in 2009 to undertake the high-level research design and survey implementation for the new longitudinal study. The NCLR specialises in longitudinal study development and implementation, with both the Dunedin Multidisciplinary Health and Development Study and the Christchurch Health and Development Study as partners. Other partners, including the Centre for Research on Children and Families, are experts in social science survey methodology, quantitative methods and demography. This made the NCLR the ideal base to develop and implement a longitudinal study of New Zealand university graduates.

### The Graduate Longitudinal Study New Zealand (GLSNZ)

The GLSNZ will provide critical information to both universities and government policy makers as they try to optimise the value of the New Zealand university experience and its potential impact on social, educational and wider societal outcomes.

A longitudinal study of New Zealand university graduates will, by tracking a sample over time, provide a rich picture of both graduates' careers and other life outcomes. International evidence suggests that the greatest impacts of a university education became apparent over a period of years following graduation, rather than in the year



immediately following graduation<sup>2</sup>. The current trend towards increased mobility, both across jobs over a working career and geographically, make it more important than ever to understand how graduate outcomes develop and change over time. There is a growing interest in measuring a wider range of outcomes than employment, and many of these have a strong longitudinal dimension. Participants were invited to complete the baseline survey in 2011 and will later complete further online surveys two years (2013), five years (2016) and ten years (2021) post-graduation.

The universities are also mindful of (1) an increasing emphasis within Government education agencies on tracking outcomes over time (e.g., transitions from school to tertiary study), and (2) developments in information and communication technology, which make pan-university study a viable option. The new longitudinal study has been developed in a manner that complements these priorities.

### GLSNZ Research Team

Director: Professor Richie Poulton  
 Project Manager: Dr Kaa-Sandra Chee  
 Project Co-ordinator: Dr Karen Tustin  
 Senior Analyst: Associate Professor Nicola Taylor  
 Senior Analyst: Ms Megan Gollop  
 Collaborator: Dr Mele Taumoepeau  
 Collaborator: Dr Jackie Hunter  
 Collaborator: Professor Gordon Harold  
 Administrator: Mrs Jocelyn Diedrichs  
 Communications and Marketing Consultant: Ms Brigid Feely  
 Computer Programmer and Website Co-ordinator: Mr Blair Hughson

### Steering Group

The GLSNZ Steering Group was formed by Universities New Zealand and is comprised of representatives from several NZ universities and Universities New Zealand (UNZ).

Members:

- **Mr David Thomson** (Chairperson)– Director, Planning and Funding, University of Otago;
- **Ms Pamela Moss** – Director, Planning Office, University of Auckland;
- **Ms Pam Thorburn** – Director, Central Student Administration, Victoria University of Wellington;
- **Mr Malcolm Rees** – Quality Manager, Academic, Massey University;
- **Ms Penny Fenwick** – Executive Director, UNZ.

The Steering Group helped to initiate the study, but now that the GLSNZ is underway its role is to provide advice and support to the longitudinal study.

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<sup>2</sup> Purcell *et al.* "The Class of '99: A study of the early labour market experience of recent graduates", October 2005, A Research Centre of the University of the West of England and Warwick Institute for Employment Research.

Recent steering group meetings were held in Wellington and attended by the GLSNZ research team on:

- 29<sup>th</sup> November 2010 at UNZ offices, Wellington
- As part of the Full Stakeholder Group meetings listed below.

### Full Stakeholder Group

The full stakeholder group is comprised of representatives from each of the eight NZ universities, the three funding institutions, and UNZ.

#### Members:

- Steering Group members as listed above
- **Mr Robert Daldy** – Research Manager, Strategic Developments, Information Research Unit, AUT;
- **Ms Helen Pridmore** – Head of Planning, Policy and Information, University of Waikato;
- **Professor Sheelagh Matear** – Assistant VC, Academic, Lincoln University;
- **Dr Erik Brogt** – Lecturer, Academic Development Group, University of Canterbury;
- **Ms Caroline Boyd** – Principal Policy Analyst, Ministry of Women's Affairs;
- **Mr Brett Parker** – Senior Policy Analyst, International Policy and Development, Ministry of Education;
- **Mr Matt Huntington** – Strategic Communications Manager, UNZ.

#### Meetings:

- 1 April 2010 at UNZ offices, Wellington
- 29 November 2010 at UNZ offices, Wellington
- 11 March 2011 at Victoria University of Wellington

### Funding

Financial support was provided primarily by the Tertiary Education Commission with supplementary support from the Ministry for Woman's Affairs and Ministry of Education, International Division, for 2010 and 2011. This covered the developmental phase of the GLSNZ, sample recruitment and implementation of the initial baseline phase of the study.

UNZ – Te Pūkai Tara, in conjunction with the Vice Chancellors of all the NZ Universities, has agreed to fund the study during 2012. Further funding will be sought to conduct future phases of the study through to 2021.

## SECTION 2: Project Planning

### Timeline

A timeline detailing each step in the different phases of the project is available in Appendix 1.

### Phase 1 – Survey Development

#### Survey Design

The Study's methodology, survey design, and instrument selection was informed by the experience of the NCLR team. It was also informed by direct contact with researchers conducting graduate outcome research, both here in New Zealand and overseas. These exchanges were augmented by information obtained via extensive literature searches. As is always the case at this stage of the research process, considerable time and resources was expended on getting this core element of the GLSNZ right.

For a detailed list of the scales used please see the "GLSNZ Measurement Book". A copy of the baseline survey administered in 2011 is outlined in the "GLSNZ Code Book".

#### Pilot Studies

During the survey development phase in 2010 and 2011, the survey was tested with several different pilot groups to ensure its content was relevant, its length was acceptable, it was culturally sensitive and it was measuring what was intended to be measured. The feedback provided by these pilot groups enabled the survey instrumentation and scales to be modified (or replaced) as appropriate.

- General population pilot - 9 December 2010  
26 students including 5 international students and 1 distance student, age range 20 to 45 years old.
- Maori student pilot - 31 March 2011  
4 students from different faculties, age range 23 to 43 years old.
- Pacific Island student pilot - 31 March 2011  
4 students from different faculties, age range 20 to 41 years old.
- Psychology student pilot - 13 July 2011  
180 x 300 level students.

#### Stakeholder Consultation

Each of the GLSNZ stakeholders were individually visited multiple times throughout the survey development process to obtain their feedback on the survey instrument as it was developed.

In October and November 2010, the GLSNZ Project Manager, Kaa-Sandra Chee, and Senior Analyst, Nicola Taylor, travelled to each University to meet with all the individual stakeholders to consult them on the research design, sample recruitment process and to obtain feedback on the draft survey instrument.

#### Individual Stakeholder Meetings:

- AUT – 27 October, 2010
- University of Waikato – 27 October 2010
- University of Auckland – 28 October 2010
- Victoria University of Wellington – 2 November 2010
- Ministry of Education – 2 November 2010
- Ministry of Women’s Affairs – 2 November 2010
- Massey University – 3 November 2010
- University of Otago – 10 November 2010
- Lincoln University – 15 November 2010
- University of Canterbury – 15 November 2010

#### **Cultural Consultation**

The survey went through extensive Maori and Pacific Island consultation in 2011 with various Maori and Pacific Island committees, groups and individuals from each university being asked for feedback. Consultation with Te Kahui Amokura, the Universities NZ Maori Consultation Committee, was also undertaken and feedback received and included in the survey instrumentation.

#### **Online Survey Development**

The online survey was developed in conjunction with the company Core Development. The design, structure, and applicability of the online survey was developed by the managing director, Blair Hughson. The online survey and data storage development was custom designed for the GLSNZ project.

### **Phase 2 – Survey Implementation**

#### **Multi-region Ethical Application**

The study protocol was submitted to the Multi-region Ethics Committee on 7 June 2011 and approved on 4 July 2011, reference number: MEC-11-EXP-049. Amendments to the instrumentation were approved on 18 November 2011.

#### **Online Survey Testing**

Extensive testing of the online instrument was completed May through July 2011. Different groups worked through the online survey to test its usability and storage functionality. The instrumentation was also tested to ensure that the correct questions were being asked of the participants. Tests were completed by Core Development to ensure that overloading of the server was not going to impact the speed and usability of the survey.

### **University Roadshow**

During March, April and May 2011, the Director, Richie Poulton, and the Project Manager, Kaa-Sandra Chee, travelled to each university to update them on the project as the launch date drew nearer. These trips also provided an opportunity for further feedback to be obtained on the near-final draft of the survey instrument. The GLSNZ Communications and Marketing Consultant, Brigid Feely, accompanied Professor Poulton and Dr Chee on several of these visits.

- Victoria University of Wellington – 8 March 2011
- University of Canterbury – 23 March 2011
- Lincoln University – 23 March 2011
- University of Waikato – 13 April 2011
- AUT – 11 May 2011
- University of Auckland – 11 May 2011
- Massey University – 17 May 2011
- University of Otago – 23 May 2011

### **Cohort Identification**

The sample cohort was defined by the GLSNZ to encompass the diversity of the eight university stakeholders. The sample definition and number of students were defined for each university by the GLSNZ research team.

The sample was defined by the broad GLSNZ domains of:

- Agriculture/Horticulture
- Commerce/Business
- Education
- Health Sciences
- Humanities/Arts/Social Sciences
- Law
- Sciences/Engineering

Within each domain the cohort was divided further into:

- Undergraduate vs. Postgraduate
- Full time vs. Part time
- Extramural vs. Intramural
- Domestic vs. International
- Male vs. Female
- Ethnicity
- Age bands (4 year bands 15-70 years, then 70+)

A copy of the Sample Recruitment Guidelines (customised for each university) is found in Appendix 2.

### **Brand & Website Development**

The GLSNZ brand and website were developed in conjunction with three external companies - To Be Frank, Core Development and BrandAid Design Communications. The brief was to attract students as potential study participants with an edgy, funky and attractive design and written material, but to also ensure that a professional and informative message was communicated.

Videos of the GLSNZ team and a Voxpop of students were put on the website to give a visual and personal touch to the project. Videos were developed in conjunction with the external companies Video Factory and To Be Frank. Filming for the videos took place on the 25 May for the GLSNZ team and on the 2 and 7 June 2011 for the student Voxpop.

### **Marketing, Communications and National Launch**

The communications plan was designed to expose final year students to the project at least three times before they were invited to participate. The communications at each university started six weeks before the university's study launch date via various methods i.e. chalking, posters, lecturer's slides, bookmarks, staff t-shirts, etc. The detailed Communications Plan is attached in Appendix 3.

The GLSNZ National Launch was held on 22 June 2011. The study was promoted to the NZ public via specific media pitching with the NZ Herald, regional newspapers and national radio. The GLSNZ website ([www.glsnz.org.nz](http://www.glsnz.org.nz)) was also launched on this date.

### **Recruitment**

Approximately 14,000 final-year university students – broadly representative of the 40,000 students completing their studies at New Zealand's eight universities during 2011 – were invited to participate. The study roll-out was staggered across each university during July and September 2011:

- University of Auckland – 31 July 2011;
- Lincoln University – 31 July 2011;
- AUT – 21 August 2011;
- Massey University – 11 September 2011;
- University of Waikato – 11 September 2011;
- University of Otago – 18 September 2011;
- Victoria University of Wellington – 18 September 2011;
- University of Canterbury – 18 September 2011;

Students were made aware of the GLSNZ project via a six week marketing campaign at their universities prior to being invited to participate (See Communications Plan Appendix 3). This awareness campaign comprised bookmarks, posters, t-shirts on staff, PowerPoint slides in lectures, facebook and twitter social networking alerts. Primer emails were also sent to final year students to create a buzz around campus about the project. This campaign ensured that the students knew about the project before they received an invitation to participate.

The participants were notified they were invited to be part of the study by a written and physically posted letter from their respective Vice Chancellors (VC). This letter was sent with a GLSNZ pen. One university did not physically send out the letter but chose to email it to their students. This letter outlined the importance of the study and also served to verify that the study was a legitimate NZ university endorsed research project. The VC letter was followed four days later by an email with the participants unique code and password to log onto the survey via the GLSNZ website. This invitation email was sent out on a Sunday to capture the student online audience.

The survey invitees were monitored and those that had started the survey but had not completed were sent email reminders at 24 hours followed by a 1 week reminder if they had not re-logged into the survey. The survey invitees that had not engaged with the survey were sent weekly email reminders to log on and complete the survey. The language in these follow up emails was carefully constructed to ensure that the students were getting different stimulation and to create a personal incentive to participate. There were three follow up emails in the three weeks following the start of each universities survey release date sent out on Sundays. The last email reminder was a short video of a student reading out other 'hypothetical' students positive comments about the survey and what they thought of it.

Two post-exam emails were sent out to those invitees that had not engaged with the survey since being invited. The final email to be sent out from the GLSNZ team was on the 11 December 2011 informing participants they had one week to complete the survey.

### **Call Centre**

From 22 August to 9 December 2011 a Call Centre operated with eight part-time employees (listed below). They were trained to phone those students who had been invited to participate in the study but who had not engaged with the survey within the first four weeks and also to follow up on those students that had started the survey but not completed it. Students were called up to four times to notify them they had been selected to participate in the GLSNZ. The Call Centre operated from 11am to 8pm each day with the employees working hours that could fit around their personal timetables. Call Centre Staff: Amelia Welsh, Corey Fulop, Eliana Glover, Esmay Eteuati, Matthew Gray, Rebecca Diedrichs, Vivian Rewi, Zara Coghill

## **Phase 3 – Information Dissemination**

### **Data Cleaning**

As students from each university completed the baseline survey the preliminary data was checked for anomalies and internal consistency. This was a visual check of the data looking for empty data points and implausible responses as well as noting for any repeated errors or inconsistencies.

90 hours were devoted to data cleaning by an experienced Master's level Data Manager (Mr Antony Ambler).

## SECTION 3: GLSNZ Policies and Procedures

### Unique Identifiers

All participants have been assigned random unique identifier numbers. This enables data to be analysed without the identity of the participants being known.

### Contact with Study Members

All written contact with study members will be over the signature of the Director, Professor Richie Poulton.

### Confidentiality of Individual Data

All information collected is for research purposes only. Information is strictly confidential and is never released to anyone outside the study unless the study members request it.

Under no circumstances will names of study members be given to the media or institutions, even with the study member's consent. Individual data will never be published. Participant names and individual identifying characteristic data will be securely stored separately from survey results and statistical data.

### Confidentiality of Institutional Data

The primary purpose of GLSNZ is to investigate the life trajectory of graduates from New Zealand universities as a whole (with appropriate sub-analysis by qualification and qualification level, and by group traits such as gender, ethnicity, etc). The GLSNZ is not, however, designed to serve as a study of the trajectory of groups of students from one university against equivalent groups of students from another institution.

For this reason, data in the form of institutional league tables will not be published. Care will also be taken to ensure that data that could easily be aggregated into an institutional league table format by a third party will not be published.

### Documentation and Security of Data

For maximum use and protection of the data both now and in the future all data sets will be securely held by the National Center for Lifecourse Research. The data will be securely archived, thoroughly documented and readily available to the present and future project team members.

Data will only be used by authorized persons and no individual data will be given to any unauthorized third person.



### **Guardianship of and Responsibilities for Use of Data**

The NCLR is the primary guardian of the data and is responsible for all data collected as part of the GLSNZ, regardless of the source of funding. Universities NZ and the universities individually, will support the NCLR in its role of guardianship over the data and in its acceptance or resistance of any requests for reports or data.

Those who have access to the data, via direct permission of the Director (or nominee), must keep the data secure, and should not pass it on to another person or institution without the knowledge and approval of the Director (or nominee). The NCLR will keep a register of all those who have data sets and ensure that all who have access to the data understand and abide by these policies.

### **Access to Data by Researchers other than the Director**

The Director, consulting with others as appropriate, may approve access to the data by suitably qualified researchers who apply to use it.

### **Publishing**

Presentation Findings (in the form of academic papers, reports, presentations, and media releases) using GLSNZ data must be approved by the Director or nominee.

## APPENDIX 1: Project Timeline

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## GLSNZ Project Timeline 2010-2012

	2010								
	April	May	June	July	August	September	October	November	December
Phase		Phase 1: Survey Development							Phase 2
Baseline Study							Obtain prospective cohort profile numbers by university division & department		Pilot study
		Survey instrument development							
Marketing							Project Manager's University Visits		Engage Comms/Marketing Consultant
								Logo and brand development	
Communications			Re-establish University contacts				Website Development		
Reporting & Outcomes	Presentation to Key Stakeholders & workshop	VC Briefing Doc (last wk May)	Invoice 001 to MWA (\$25,000)	TEC payment 1 (\$240,000- \$150,000 already paid in 2009 = \$90,000) +report 10 July				29 <sup>th</sup> Stakeholder meeting	TEC payment 2 + report 10 Dec (\$150,000) Comms & Marketing Plan Newsletter, Dec issue

	2011											
	January	February	March	April	May	June	July	August	September	October	November	December
Phase	Phase 2: Survey Implementation									Phase 3: Information Dissemination (till March 2012)		
Baseline Study			Pilot study Maori and PI students			<input checked="" type="checkbox"/> PI meet with VC's <input checked="" type="checkbox"/> 7 <sup>th</sup> Ethics submitted	31 July – Lincoln + Auckland	21 Aug – AUT	11 Sept – Waikato + Massey 18 Sept – Otago, Victoria + Canterbury	Post-exam follow-up period	<input checked="" type="checkbox"/> 16 <sup>th</sup> Survey closes	
	Ethics prepared									Data Cleaning		
						Website & online survey testing				Preliminary Analysis		
										Call centre follow-up		
Marketing		<input checked="" type="checkbox"/> Engage with online computer consultant		<input checked="" type="checkbox"/> Engage with focus groups	<input checked="" type="checkbox"/> Begin ongoing media monitoring, via google (BF+KC) <input checked="" type="checkbox"/> Video- factory engagement	<input checked="" type="checkbox"/> 22 June: National media release of launch + specific media pitching <input checked="" type="checkbox"/> 22 June: GLSNZ website LIVE	Targetted awareness raising with cohort					
	Logo and brand development											
	Website and online survey development											
Research Communications				<input checked="" type="checkbox"/> Sample #s from Unis (2010)	<input checked="" type="checkbox"/> Sample #s from Unis (2011)	Cohort Identification & contact						
			Richie's University Roadshow									
Reporting & Outcomes		<input checked="" type="checkbox"/> Stakeholder meeting, 11th Wellington	<input checked="" type="checkbox"/> Newsletter, Mar issue <input checked="" type="checkbox"/> Stakeholder meeting		<input checked="" type="checkbox"/> Invoice 1 to MoE (\$25K)	<input checked="" type="checkbox"/> Newsletter, Jun issue	<input checked="" type="checkbox"/> Newsletter, Jul issue <input checked="" type="checkbox"/> 31 July Invoice 2 to MWA (\$10K)	<input checked="" type="checkbox"/> TEC payment 3 + report 10 Aug (\$260K)	<input checked="" type="checkbox"/> Newsletter, Sep issue		<input checked="" type="checkbox"/> Start development of follow up survey, costings and timelines	

	2012											
	January	February	March	April	May	June	July	August	September	October	November	December
Phase	Phase 3: Information Dissemination											
Baseline Study		<input checked="" type="checkbox"/> 28 <sup>th</sup> – Descriptive report to stakeholders	<input type="checkbox"/> Early March 1-page summary to participants <input type="checkbox"/> 31 <sup>st</sup> – Full descriptive report to stakeholders	<input type="checkbox"/> 30 <sup>th</sup> – Feedback of initial findings to participants	<input type="checkbox"/> 31 <sup>st</sup> – Liaison over additional information requests from unis		<input type="checkbox"/> 31 <sup>st</sup> – Wellington meeting to share findings to interested parties	<input type="checkbox"/> 31 <sup>st</sup> – Joint project with at least 1 other external agency	<input type="checkbox"/> 30 <sup>th</sup> – Initial engagement with Unis on design & 1 <sup>st</sup> assessment wave	<input type="checkbox"/> 31 <sup>st</sup> – Presentation to at least 1 academic or uni admin conference		<input type="checkbox"/> 30 <sup>th</sup> Presentation to at least 1 further academic or uni admin conference
Marketing												
Research Communications			<input type="checkbox"/> Start manuscript preparation to scientific journals	<input type="checkbox"/> 3 <sup>rd</sup> – Public press release in conjunction with UNZ								
Reporting & Outcomes	<input checked="" type="checkbox"/> 10 <sup>th</sup> - TEC report <input checked="" type="checkbox"/> UNZ Invoice 1 \$55,000 (payment due 20 Feb)	<input checked="" type="checkbox"/> Invoice 2 to MoE (\$25K) <input checked="" type="checkbox"/> Invoice 3 to MWA (\$15K)			<input type="checkbox"/> 2 <sup>nd</sup> - Stakeholder meeting, Dunedin	<input type="checkbox"/> 30 <sup>th</sup> - Interim Report due to UNZ (based on milestones)	<input type="checkbox"/> UNZ Invoice 2 \$55,000 (payment due 20 Aug)				<input type="checkbox"/> 30 <sup>th</sup> - 2012 Annual Report due to UNZ	

## APPENDIX 2: Sample Recruitment

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# University X

## Sample Recruitment Guidelines

Students eligible for inclusion in the GLSNZ cohort are final-year students in 2011. Final-year students are students who are in a programme of study that will potentially allow them to complete the requirements for their qualification in 2011 (i.e. their normal annual course load will allow them to complete their qualification in 2011).

This includes:

- Students who have the potential to complete their qualification during the first or second semesters in 2011.
- Students who are intending to complete a Bachelor's degree or above (i.e., Level 7 or above, Postgraduate Diploma, Masters, PhD).
- **All international PhD students who are intending to complete their PhD in 2011.**

This does not include:

- Students who completed their qualification during the 2011 Summer School.
- Students who are intending to complete pre-degree or foundation year courses.

### Number of students required

In the pages that follow, please find the total number of final-year students that we require from the University X within each GLSNZ domain as well as a breakdown of the type of students required within each domain (e.g., male vs. female, undergraduate vs. postgraduate, full-time vs. part-time, etc.). Please see the Appendix (pp. 7-11, GLSNZ Definitions) for more information about each of these variables.

Note that the numbers of students we require are aspired - to numbers and best approximations are fine – 3% either side of the target numbers is entirely acceptable.

Please generate students randomly. A random number generator is available at <http://www.graphpad.com/quickcalcs/randomN1.cfm>

You will likely have a standard approach for identifying the students, however, we have included an example of an approach taken by one university should this be helpful to you.

Example approach for generating students:

- a. Identify all students enrolled in 2011 (and appropriate characteristics to allow them to be fitted them into the groups GLSNZ require).
- b. For those students identified, pull all credit points earned towards the qualification in which they are enrolled up to end of 2010.
- c. Identify the number of credits required to finish their qualification and match that against the credits they are enrolled in for 2011. Examine their latest enrolment date as well to see that they will finish during 2011.
- d. If they have enough credits to complete, they will be counted as a finisher (under the assumption that they will pass all their papers in 2011). Also take note of any special requirements (i.e., industry hours etc).
- e. Allocate finishers into the groups - order by a random number and then take what is needed (and then check this to see that all composite groups are covered).

**Fields required**

Once you have identified students for inclusion in the cohort, please arrange the students' details in a spreadsheet (see p. 6, 'Fields required').

**Refer to: GLSNZ Definitions**

We have included the GLSNZ Definitions document that we sent you along with our request for your 2010 completion numbers. Included here are definitions of the GLSNZ domains and definitions for the other information required for each domain.

Please contact us should you have any further questions or if there is anything we can help you with.



**Total number of students required**

Domain	Number required
Agriculture/Horticulture	X
Commerce/Business	X
Education	X
Health Sciences	X
Humanities/Arts/Social Sciences	X
Law	X
Sciences/Engineering	X
<b>Total</b>	<b>X</b>

**REMINDER**

Include ALL international PhD students (in their final year) in addition to the X students requested.





## Fields required

Please arrange the student details in a spreadsheet with the following column headers:

Column Number	Column Header
Column 1	First name
Column 2	Last name
Column 3	Student ID
Column 4	Email 1
Column 5	Email 2*
Column 6	Contact phone number 1
Column 7	Contact phone number 2*
Column 8	DOB
Column 9	Gender
Column 10	Primary ethnicity
Column 11	Course
Column 12	Degree level (undergraduate vs. postgraduate)
Column 13	EFTS (full-time vs. part-time)
Column 14	Method (intramural vs. extramural)
Column 15	Domestic vs. international

\* We would appreciate this information if it is known and available.

## GLSNZ Definitions

### GLSNZ Student cohort

A representative sample of students intending to complete a Bachelor's degree or above (i.e. level 7 or above, Postgraduate Diploma, Masters, PhD), in 2011, are eligible for inclusion in the cohort.

### 2011 Final Year Students

All students who are in a programme of study that will potentially allow them to complete the requirements for their qualification in 2011 (i.e. their normal annual course load will allow them to complete their qualification in 2011).

This includes:

- Students that have the potential to complete their qualification during the first or second semesters in 2011.

This does not include:

- Students who completed their qualification during the 2011 summer school.

## GLSNZ Domains

- Agriculture/Horticulture
- Commerce/Business
- Education
- Health Sciences
- Humanities/Arts/Social Sciences
- Law
- Sciences/Engineering

*Refer to “Domain Constituents” section below for breakdown of each university.*

*It is important not to count students twice, e.g., if they enrolled in a conjoint/double degree, the highest qualification or the qualification that takes the longest time to complete should be the one that is used for sampling purposes. When the two degrees are of the same duration (e.g., BA, BCom) use the primary faculty to define that student.*

*A small number of students are completing both undergraduate and postgraduate qualifications. In this case the highest level qualification should be the one that is used for sampling purposes.*

*Note: PhDs are to be assigned to the GLSNZ Domain in which their host department falls.*

### Other information required for each Domain:

#### **Sex**

- Male
- Female

#### **Ethnicity**

- New Zealand European
- Māori
- Samoan
- Cook Islands Maori
- Tongan
- Niuean
- Chinese
- Indian
- Other (e.g., Dutch, Japanese, Tokelauan)

#### **Full-time vs. Part-time**

- Full-time = A student enrolled in a programme of study for the full year equates to 1EFTS. A student enrolled full-time for a semester equates to 0.5EFTS.
- Part-time = A student that does not meet the requirements above as full-time.

#### **Undergraduate (UG) vs. Postgraduate (PG)**

- UG = Bachelors (including Honours\*), conjoint/double degree Bachelors.
- PG = Graduate Certificates, Graduate Diplomas, Postgraduate Certificates, Postgraduate Diplomas, Masters (including Honours), PhD.

*Note: there will be situations where some students completing their fourth year will be coded as undergraduates (i.e. BA(hons), whereas other students completing their fourth year will be coded as postgraduates (e.g., postgraduate diploma in Arts). Both are level 8 qualifications according to the National Qualifications Framework. They can be grouped together at a later date as required.*

***Intramural vs. Extramural***

- If 50% or more of total EFTS are internal papers = Internal.
- If greater than 50% of total EFTS are extramural papers = Extramural.

***International vs. Domestic***

- Separate into either “International” or “Domestic”, i.e., we do not need to know the country of the international student.
- Include all international PhDs

***Age***

- 15–19 Years
- 20–24 Years
- 25–29 Years
- 30–34 Years
- 35–39 Years
- 40–44 Years
- 45–49 Years
- 50–54 Years
- 55–59 Years
- 60–64 Years
- 65–69 Years
- 70 Years and Over



### GLSNZ Domain Constituents

University	AGRICULTURE/ HORTICULTURE	COMMERCE/ BUSINESS	EDUCATIO N	HEALTH SCIENCES	HUMANITIES/ARTS/ SOCIAL SCIENCES	LAW	SCIENCES/ENGINEERING
<b>Waikato</b>		Management School	Education		Arts & Social Sciences	Law	Computing & Mathematical Sciences Science and Engineering
<b>Canterbury</b>		Commerce	Education Teaching & Learning		Creative Arts Humanities & Social Sciences	Law	Engineering and Forestry Science
<b>Lincoln</b>	Agriculture & Life Sciences	Commerce			Environment, Society & Design		
<b>Massey</b>	Veterinary Science	Business	Education		Creative Arts/Design Humanities & Social Sciences		Science
<b>Otago</b>		Commerce	Education	Health Sciences	Humanities		Science
<b>AUT</b>		Business	Education	Health Sciences	Applied Humanities Arts Design & Creative Tech	Law	Health & Environment Computer/Maths Sciences Engineering
<b>Victoria</b>		Commerce & Administration	Education		School of Music Architecture & Design Humanities & Social Science	Law	Science
<b>Auckland</b>		Business & Economics	Education	Medical & Health Sciences	Creative Arts & Industries Arts	Law	Science Engineering

## APPENDIX 3: Communications Plan

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## Communications Plan

Timeframes	Tactic	Funding providers	Unis	Study participants	NZ public
March 2011	Mid March: Richie Roadshow starts	x	x		
	Late Mar: E-Newsletter	x	x		
April 2011	Meet with Otago M&C re targeted awareness. Consult to identify realistic, cost-effective and appropriate means of reaching this audience – given we do know they are final-year students, so there will be activities that are specific to final-year students that we may be able to capitalise on (for instance graduation-related correspondence, although that would be later in the year)				
June 2011	National Launch – public campaign (22 June)	x	x	x	x
	Website Launch	x	x	x	
	Late June: E-Newsletter	x	x		
	Targeted awareness raising campaigns within sub groups, such as International and Maori/Pacific Island students	x	x	x	
	Start 6 week pre-launch marketing campaign into Lincoln and Auckland Universities. Targeted awareness raising campaign within each university. Example tactics: GLSNZ bookmarks (pointing people to the website) left on desks in libraries; posters circulated to Careers Advice Offices and around each campus, t-shirts on key staff, Facebook, Twitter and Wikipedia presence		x	x	
July 2011	Distribution of the survey - VC letter and pen to be mailed to each participant in the week prior to survey invite - 31 July – Lincoln and Auckland Universities			x	
	Late July: E-Newsletter	x	x		
	Start 6 week pre-launch marketing campaign into Waikato University		x	x	

Timeframes	Tactic	Funding providers	Unis	Study participants	NZ public
Aug 2011	Distribution of the survey - VC letter and pen to be mailed to each participant in the week prior to survey invite - 21 August – AUT			x	
	Follow up emails – week 2, 3, 4 Call Centre follow up – starting week 4			x	
	Start 6 week pre-launch marketing campaign into remaining universities		x	x	
Sept 2011	Distribution of the survey - VC letter and pen to be mailed to each participant in the week prior to survey invite - 11 September – Waikato and Massey Universities - 18 September – Otago, Victoria and Canterbury Universities			x	
	Late Sept: E-Newsletter	x	x		
Oct 2011	Follow up emails – week 2, 3, 4 Call Centre follow up – starting week 4	x	x		
Nov 2011	Post-exam follow up email 1 - 4 November - University of Waikato - 8 November – Lincoln University - 13 November – University of Otago - 15 November – Auckland, AUT, Victoria, Canterbury Universities - 22 November – Massey University			x	
	Post-exam follow up email 2 - 27 November – Waikato, Lincoln, Otago, Auckland, AUT, Victoria, Canterbury Universities - 30 November – Massey University			x	
Dec 2011	Final email reminder - 11 December – to all universities			x	
	Survey closing date - 16 December			x	
February 2012	Circulation of preliminary copy of GLSNZ baseline results press release	x	x	x	x
	Circulation of baseline report	x	x	x	

### New Zealand public

The New Zealand public is an audience, which needs to be considered in a realistic manner. Creating an awareness among sub groups, such as parents and friends of participants, will enhance the credibility of the study and the importance of the role participants play. Consideration needs to be given to creating photo and television opportunities, as these will be limited given the nature of longitudinal studies (i.e. the need for anonymity of participants).

Timeframes	Tactic
June 2011	Target limited number of key media (New Zealand Listener, Radio NZ Kim Hill Show, other) to alert to upcoming GLSNZ announcement and line up interviews/articles in advance
	Circulate GLSNZ announcement press release to general media
February 2012	Circulate GLSNZ baseline results press release. Again, pre-warn key media and line up advance interviews
2013	Articles in various Alumni magazines reaching a wide audience past graduates and influential people. Letting people know of the next assessment phase (second half of 2013)

### **Evaluation**

As part of fully developing the tactical plans, it is good practice to also determine evaluation measures against each tactical activity, where practical.

Measures will include:

- Monitoring of media coverage – for number of “hits”, the quality of the hits and their positive/negative weighting. This can be done cost-effectively via Google Alerts, by establishing appropriate key word searches to pick up mentions of the study as they appear on line.
- It may be possible and a positive exercise to check in with ministry and university contacts, around the time of the survey beginning (July 2011) to enquire about their satisfaction with regard to communications. This can be done via a phone conversation and relatively informally – serving the purpose of (a) determining where improvement could be made and (b) enhancing the relationships.
- Monitoring hits to website, particularly immediately following tactical activity pointing people to the website (e.g. bookmarks in libraries).
- Percentage engagement in initial survey (although, realistically, many factors will feed into this and it will be difficult to directly link this back to communications activity).