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An analysis of self-reported graduates

Ben Braysher

National Centre for Vocational Education Research

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About the research

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An analysis of self-reported graduates

### Ben Braysher, National Centre for Vocational Education Research

The annual Student Outcomes Survey collects information on the outcomes of two groups of students — those that have completed a qualification (graduates) and those that have completed only part of a course and then left the vocational education and training (VET) system (module completers). At the time of selecting the survey sample, insufficient information is available to identify ‘actual’ module completers. Instead, a sample of potential module completers is drawn that includes students still in training and students who self-report that they have completed the qualification; that is, self-reported graduates. For many years these students have been counted as graduates in survey outputs. This paper examines whether:

* self-reported graduates were eligible for the qualifications they claimed (in fact, around two-thirds were not eligible)
* it is possible to predict a self-reported graduate’s eligibility for the claimed qualification using their personal and training characteristics.

The report recommends that self-reported graduates should be assigned to the graduate or module completer category using a predictive model. This model incorporates information on the type of training provider, field of education, level of qualification, whether an apprentice or trainee, enrolment type, and method of answering the survey.

The current practice of treating self-reported graduates biases the survey results. The predictive model will be used for 2012 Student Outcomes Survey reporting. The methodology will change estimates from previous surveys substantially, so these will be back cast to 2005 using the method described.

Tom Karmel  
Managing Director, NCVER

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# Background

The Student Outcomes Survey collects information about students who completed their vocational education and training (VET) in the previous calendar year. The survey covers students who have completed a qualification (graduates) and those who have completed only part of a course and then left the VET system (module completers). The National Centre for Vocational Education Research (NCVER) has conducted the survey annually since 1997. At the time of selecting the survey sample, insufficient information is available to identify ‘actual’ module completers. Instead, a sample of potential module completers is drawn that includes students still in training and students who report they have completed the qualification; that is, self-reported graduates. For many years, these students have been counted as graduates in survey outputs. In 2010, around 32% of graduates counted in the Student Outcomes Survey were self-reported. This practice is due, in part, to the profile of these students and the known delay in the administrative collection reporting all qualifications. It is also conceivable that the student may have completed the qualification after the calendar year but prior to the survey reference date of the last week in May. It is these students who are the subject of this report. The issue is the eligibility of self-reported graduates for the qualification they claimed.

Using information from the Student Outcomes Survey and the National VET Provider Collection, this report:

* quantifies the proportion of self-reported graduates who were ineligible for the qualification they claimed
* examines whether it is possible to predict a self-reported graduates’ eligibility for the claimed qualification using their personal and training characteristics
* determines the impact of predicting eligibility on key survey measures
* recommends how self-reported graduates should be counted.

# Methodology

## Determining eligibility for the qualification claimed

Information from the National VET Provider Collection was used to determine the eligibility of self-reported graduates for the qualification they claimed. The investigation covered self-reported graduates in the 2007, 2008 and 2009 Student Outcomes Surveys which represented 43.7%, 29.7% and 42.9% of all reported graduates, respectively.

The National VET Provider Collection is an annual administrative collection of information on students, the courses they undertake and their achievement. For each survey, three collections were investigated to determine if the self-reported graduates had been awarded a qualification and reported in subsequent years. These were: the collection from which the survey sample was selected (the source collection) and the two collections directly following the source collection. For example, the 2008—10 VET Provider Collections were used to determine the eligibility of self-reported graduates in the 2009 survey, which drew its sample from the 2008 collection.

By definition, a graduate must have completed their training in the calendar year directly preceeding the year of the survey. There are lags in the reporting of awards to the National VET Provider Collection. To account for this, the following rules were applied to determine whether a self-reported graduate was eligible for the qualification claimed. Students were considered eligible for a qualification if in:

* the source collection they were recorded as having completed a qualification in that year
* the subsequent collection they were recorded as having completed a qualification in that year or in the source year
* the following collection they were recorded as having completed a qualification in the source year.

Students’ eligibility for the claimed qualification was classified to one of four categories (table 1).

Table 1 Categories used to define the eligibility of self-reported graduates for the qualifications claimed

|  |  |
| --- | --- |
| Category | Eligibility |
| 1 | Eligible for the claimed qualification |
| 2 | Eligible for a different qualification |
| 3 | Ineligible for the claimed qualification – qualification awarded in a later year |
| 4 | Ineligible for the claimed qualification – no record of a completed qualification |

If a self-reported graduate can be classified to more than one category, category one takes precedence, followed by category two, and so on.

## Predicting the eligibility of self-reported graduates

We next looked at the characteristics of self-reported graduates to determine whether they had any characteristics in common (appendix A). A logistic model was run to determine whether it is possible to predict a student’s eligibility for a claimed qualification based on their personal and training characteristics.

The model used eligibility for the claimed qualification as the binary response variable and students’ personal and training characteristics as the predictor variables. Using data from the 2007, 2008 and 2009 Student Outcomes Surveys, the best subset of predictor variables that fitted the data adequately was selected (appendix B). Data from the three surveys were combined to inform the model more accurately. In order to avoid loss of data, missing and unknown values of each variable were included in the model. Table B1 shows the variables fitted and their status in the final model. The analysis used to define the model is shown in appendix C.

The final model predicts the probability that a self-reported graduate is eligible for the qualification they claimed. If the probability is greater than or equal to 0.5, the student is considered eligible for the qualification and classified as a graduate. Alternatively, if the probability is less than 0.5, the student is considered ineligible for the qualification. These students are classified as module completers if they have left the VET system; otherwise they would be continuing students and therefore out of scope.

## Effect predicting eligibility has on key survey measures

One consideration in deciding whether we should change the current practice of treating self-reported graduates as graduates is whether it makes a difference to the survey results. That is, we look at the extent of any bias relating to the treatment of self-reported graduates. We do this by looking at the effect reclassifying self-reported graduates has on nine key survey measures from the Student Outcomes Survey, using their predicted eligibility for the claimed qualification.

If the bias proves to be substantial, then the adoption of the predictive model would imply that we would need to back cast the key survey measures.

# Results

## Predicting the eligibility of self-reported graduates

Table 2 shows the eligibility of self-reported graduates to the 2009 Student Outcomes Survey using the categories defined in table 1.

Table 2 Eligibility of self-reported graduates to the 2009 Student Outcomes Survey for the qualification by state (%)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| State | Eligible | | Ineligible | | Total |
|  | For claimed qualification | For different qualification | Qualification awarded in 2010 | No qualification awarded |  |
| New South Wales | 35.6 | 5.9 | 1.4 | 57.1 | 100.0 |
| Victoria | 20.8 | 3.6 | 0.8 | 74.7 | 100.0 |
| Queensland | 29.6 | 5.0 | 0.8 | 64.5 | 100.0 |
| South Australia | 56.6 | 5.9 | 3.0 | 34.5 | 100.0 |
| Western Australia | 21.6 | 3.9 | 2.7 | 71.8 | 100.0 |
| Tasmania | 12.4 | 3.8 | 1.3 | 82.5 | 100.0 |
| Northern Territory | 30.1 | 3.3 | 2.2 | 64.3 | 100.0 |
| Australian Capital Territory | 45.6 | 7.7 | 0.5 | 46.3 | 100.0 |
| Australia | 28.1 | 4.5 | 1.5 | 65.9 | 100.0 |
| Australia (n) | 6 386 | 1 026 | 332 | 14 947 | 22 691 |

Of the self-reported graduates in the 2009 Student Outcomes Survey:

* 28.1% were eligible for the qualification they claimed.
* 4.5% claimed a qualification that was different to that reported in the National VET Provider Collection. Further investigation found that the majority had been awarded a qualification in the same field of education but at a different level, or a qualification at the same level with a similar name to the claimed qualification. These students were categorised as eligible for the claimed qualification for the purposes of further analysis.
* 1.5% were awarded the claimed qualification, but not until 2010, so were out of scope of the 2009 Student Outcomes Survey and thus considered ineligible for the qualification at that time.
* 65.9% had no record of completing a qualification and so were ineligible for the qualification claimed.

Consequently, only 32.7% of self-reported graduates in the 2009 survey could legitimately be classified as graduates. This compares with 28.9% of self-reported graduates in the 2007 survey and 34.9% in the 2008 survey (table 3).

Table 3 Self-reported graduates in the 2007, 2008 and 2009 Student Outcomes Surveys eligible for claimed qualification by state (%)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| State | 2007 | 2008 | 2009 | 2007 to 2009 combined |
| New South Wales | 39.9 | 39.6 | 41.5 | 40.5 |
| Victoria | 23.6 | 31.2 | 24.5 | 24.8 |
| Queensland | 29.0 | 37.7 | 34.7 | 33.0 |
| South Australia | 49.4 | 58.6 | 62.5 | 56.2 |
| Western Australia | 28.1 | 34.9 | 25.5 | 27.5 |
| Tasmania | 15.2 | 12.9 | 16.2 | 14.9 |
| Northern Territory | 1.2 | 38.7 | 33.5 | 22.8 |
| Australian Capital Territory | 52.8 | 50.0 | 53.3 | 52.7 |
| Total | 28.9 | 34.9 | 32.7 | 31.4 |

Note: Between the 2006 and 2007 National VET Provider Collections, the Northern Territory revised their client identifiers; hence the low matching rate for their students in the 2007 Student Outcomes Survey.

Table 4 compares self-reported graduates’ predicted eligibility for the claimed qualification with their actual eligibility based on the information from the National VET Provider Collection. This shows the model correctly predicts the eligibility of 74.8% of self-reported graduates to the 2007—09 Student Outcomes Surveys combined, with 14.1% verified as eligible for the qualification they claimed and 60.7% verified as ineligible. Results for the individual years 2007—09 are similar and are shown separately in appendix D.

Table 4 Comparison of self-reported graduates’ eligibility for the claimed qualification from the National VET Provider Collection with their predicted eligibility, 2007 to 2009 combined (%)

|  |  |  |  |
| --- | --- | --- | --- |
| Eligibility in VET provider collection | Predicted eligibility | | |
| Eligible | Ineligible | All |
| Eligible | 14.1 | 17.3 | 31.4 |
| Ineligible | 7.9 | 60.7 | 68.6 |
| **All** | **22.0** | **78.0** | **100.0** |

Note: Grey shading indicates that the eligibility status was correctly predicted by the logistic model.

Realistically, we have two alternatives from which to choose. We can use our predictive model, in which case we correctly classify almost 75% of self-reported graduates. Alternatively, we could assign all self-reported graduates as module completers, in which case we would correctly classify 68.6%. The former is clearly superior and has the added advantage that it does not introduce the bias that would occur from deliberately categorising all self-reported graduates as module completers.

## Effect predicting eligibility has on key survey measures

We now look at the extent of any bias by comparing two groups:

* graduates as they were reported in survey outputs (where all self-reported graduates were classified as graduates)
* modelled estimates (where self-reported graduates are assigned to the graduate or module completer category on the basis of the predictive model).

Table 5 shows these comparisons for a range of key measures for graduates. Table 6 provides analogous results for module completers.

Eight of the nine key measures for predicted graduates were significantly different from those of reported graduates in 2009 (table 5). The only measure not affected by the reclassification of self-reported graduates was the proportion that achieved their main reason for doing the training[[1]](#footnote-1). The largest difference between predicted and reported graduates was for the measure of the proportion of graduates not employed before training who were employed after training. The difference between predicted and reported graduates was 5.0 percentage points in 2009, 5.3 percentage points in 2008 and 4.9 percentage points in 2007 (tables 5, E1 and E2).

Eight of the nine key measures for predicted module completers were also significantly higher from those of reported module completers in 2009 (table 6). The only measure not affected by the reclassification of self-reported graduates was the proportion employed after training.

Thus, it is clear that the method used to classify self-reported graduates has a significant effect on survey results. This is not surprising given known differences in outcomes between those who completed the full qualification and module completers. What is clear is that not all self-reporting graduates should be classified as graduates, but some should.

Table 5 Comparison of survey outputs with modelled estimates for graduates on key measures from the Student Outcomes Survey, 2009 (%)

|  |  |  |
| --- | --- | --- |
| Graduates | 2009 survey outputs | Modelled estimates |
| **Total reported VET** |  |  |
| Employed after training | 77.8 | 79.6 |
| Employed or in further study after training | 87.6 | 89.9 |
| Enrolled in further study after training | 32.1 | 35.0 |
| Fully or partly achieved main reason for doing the training | 86.4 | 86.1 |
| Satisfied with the overall quality of training | 89.1 | 88.5 |
| Of those employed after training |  |  |
| Reported that the training was relevant to their current job | 77.5 | 79.6 |
| Received at least one job-related benefit | 72.0 | 75.8 |
| Of those not employed before training |  |  |
| Employed after training | 42.7 | 47.7 |
| Of those employed before training |  |  |
| Employed after training at a higher skill level | 20.9 | 25.1 |

Note: Grey shading indicates a statistically significant difference at the 95% level when compared with 2009 survey outputs.

Source: Student Outcomes Survey, 2009, unpublished data.

Table 6 Comparison of survey outputs with modelled estimates for module completers on key measures from the Student Outcomes Survey, 2009 (%)

|  |  |  |
| --- | --- | --- |
| Module completers | 2009 survey outputs | Modelled estimates |
| **Total reported VET** |  |  |
| Employed after training | 74.1 | 74.6 |
| Employed or in further study after training | 77.1 | 79.5 |
| Enrolled in further study after training | 4.6 | 14.4 |
| Fully or partly achieved main reason for doing the training | 82.0 | 83.8 |
| Satisfied with the overall quality of training | 84.6 | 86.6 |
| Of those employed after training |  |  |
| Reported that the training was relevant to their current job | 64.5 | 68.4 |
| Received at least one job-related benefit | 54.2 | 59.1 |
| Of those not employed before training |  |  |
| Employed after training | 26.0 | 30.1 |
| Of those employed before training |  |  |
| Employed after training at a higher skill level | 9.5 | 11.6 |

Note: Grey shading indicates a statistically significant difference at the 95% level when compared with 2009 survey outputs.

Source: Student Outcomes Survey, 2009, unpublished data.

# Discussion

The current practice in the Student Outcomes Survey is to assume all self-reported graduates are graduates and report them as such. This assumption is true only 31.4% of the time for self-reported graduates from the combined 2007—09 Student Outcomes Surveys. This implies that 68.6% of the time, self-reported graduates are incorrectly classified as graduates. This misclassification has a significant effect on key survey measures for both graduates and module completers. Thus, maintaining the current practice is untenable.

Ideally, it would be best to report survey results using students’ actual eligibility for a qualification based on information from the National VET Provider Collection. However, due to legitimate lags in reporting qualifications to the collection, this is not possible during the current survey timeframe.

Classifying all self-reported graduates as module completers gives a better approximation to their eligibility for the qualification than the current method, with a 68.6% match rate for the combined 2007—09 Student Outcomes Surveys. However, about 30% of self-reported graduates eligible for the qualification they claimed would now be misclassified as module completers. Moreover, the self-reported graduates are different from module completers and so classifying self-reported graduates as module completers would introduce bias.

Predicting the status of self-reported graduates using a logistic model that accounts for students’ demographic and training characteristics from the 2007—09 surveys gives a better approximation of their eligibility for the claimed qualification, with a 74.8% match rate. Adopting this method into the survey methodology will produce survey estimates that are more representative of VET student experiences and outcomes. If this method were adopted, about 78% of self-reported graduates would be classified and reported as module completers and 22% as graduates.

Reclassifying self-reported graduates using their predicted eligibility for the claimed qualification has a significant effect on key survey measures. As such, changing the classification of self-reported graduates will result in a break in series. To overcome this, we will apply the same methodology to previous surveys to provide a time series back to 2005.

# Recommendations

Given the high number of self-reported graduates that are incorrectly classified as graduates in outputs from the Student Outcomes Survey, we recommend using a logistic model to predict their eligibility for the claimed qualification and reporting them accordingly. This will produce survey estimates that are more representative of VET student experiences and outcomes. The Student Outcomes Survey alternates between a large sample (of 300 000 students) and a small sample (of 80 000 students). The model applied in this paper used information from three surveys, with two large and one small sample. To ensure the model remains valid, we recommend it be reviewed every four years and updated accordingly using the two most recent large surveys and the most recent small survey.

We also recommend changing the composition of the survey sample on the assumption that about 78% of self-reported graduates (who make up about a third of the potential module completer sample) will no longer be reported as graduates. This is to ensure that standard errors for graduates remain at a satisfactory level.

# Appendix A

## Characteristics of self-reported graduates

Table A1 Personal characteristics of self-reported graduates in the 2009 Student Outcomes Survey by their eligibility for the qualification claimed (%)

|  |  |  |
| --- | --- | --- |
| Personal characteristics1 | Eligible | Ineligible |
| Age |  |  |
| 15 to 19 years | 30.1 | 69.9 |
| 20 to 24 years | 45.7 | 54.3 |
| 25 to 44 years | 34.8 | 65.2 |
| 45 to 64 years | 25.9 | 74.1 |
| 65 years and over | 11.3 | 88.7 |
| Sex |  |  |
| Male | 28.3 | 71.7 |
| Female | 36.5 | 63.5 |
| Indigenous status |  |  |
| Indigenous | 28.3 | 71.7 |
| Not Indigenous | 33.0 | 67.0 |
| Disability status |  |  |
| With a disability | 28.8 | 71.2 |
| Without a disability | 33.3 | 66.7 |
| Language spoken at home |  |  |
| Language other than English | 31.9 | 68.1 |
| English | 33.0 | 67.0 |
| Remoteness (ARIA)2 |  |  |
| Major cities | 36.3 | 63.7 |
| Inner regional | 31.9 | 68.1 |
| Outer regional | 28.1 | 71.9 |
| Remote | 25.6 | 74.4 |
| Very remote | 19.1 | 80.9 |
| Highest qualification before training |  |  |
| Diploma or higher | 29.9 | 70.1 |
| Certificate III/IV | 34.9 | 65.1 |
| Year 12 | 39.5 | 60.5 |
| Year 11/certificate I/II | 32.2 | 67.8 |
| Year 10 or below | 27.5 | 72.5 |
| All respondents (%) | 32.7 | 67.3 |
| All respondents (n) | 7 412 | 15 279 |
| Total estimated population (%) | 30.6 | 69.4 |
| Total estimated population (N) | 82 760 | 187 620 |

Notes: 1 Missing values of these variables have been excluded from this table.

2 ARIA = Accessibility–Remoteness Index of Australia.

Source: Student Outcomes Survey, 2009, unpublished data.

Table A2 Training characteristics of self-reported graduates to the 2009 Student Outcomes Survey by their eligibility for the qualification claimed (%)

|  |  |  |
| --- | --- | --- |
| Training characteristics1 | Eligible | Ineligible |
| Type of training provider |  |  |
| TAFE and other government | 33.7 | 66.3 |
| ACE2 | 4.7 | 95.3 |
| Private providers | 26.2 | 73.8 |
| Field of education |  |  |
| Natural and physical sciences | 41.7 | 58.3 |
| Information technology | 44.8 | 55.2 |
| Engineering and related technologies | 27.3 | 72.7 |
| Architecture and building | 44.0 | 56.0 |
| Agriculture, environmental and related studies | 16.6 | 83.4 |
| Health | 42.9 | 57.1 |
| Education | 52.2 | 47.8 |
| Management and commerce | 38.9 | 61.1 |
| Society and culture | 41.6 | 58.4 |
| Creative arts | 31.9 | 68.1 |
| Food, hospitality and personal services | 18.2 | 81.8 |
| Qualification level |  |  |
| Diploma and above | 56.0 | 44.0 |
| Certificate IV | 40.1 | 59.9 |
| Certificate III | 36.0 | 64.0 |
| Certificate II | 16.7 | 83.3 |
| Certificate I | 14.3 | 85.7 |
| Enrolled as part of an apprenticeship/traineeship |  |  |
| Yes | 48.3 | 51.7 |
| No | 29.0 | 71.0 |
| Labour force status after training |  |  |
| Employed | 33.8 | 66.2 |
| Not employed | 28.8 | 71.2 |
| Enrolment type3 |  |  |
| New enrolment | 28.0 | 72.0 |
| Continuing student | 50.5 | 49.5 |
| Method of answering the survey |  |  |
| Hard copy | 29.8 | 70.2 |
| Online | 37.0 | 63.0 |
| Telephone | 29.8 | 70.2 |
| All respondents (%) | 32.7 | 67.3 |
| All respondents (n) | 7 412 | 15 279 |
| Total estimated population (%) | 30.6 | 69.4 |
| Total estimated population (N) | 82 760 | 187 620 |

Notes: 1.Missing values of these variables and values of the variables with small frequencies have been excluded from this table.

2. ACE = adult and community education.

3. Also known as the Commencing Flag.

Source: Student Outcomes Survey, 2009, unpublished data.

The characteristics of ineligible self-reported graduates to the 2007 and 2008 Student Outcomes Surveys are similar to those of the 2009 survey.

# Appendix B

## Variables fitted and their status in the final logistic model

Table B1 Variables fitted and their status in the final logistic model used to predict   
the eligibility of self-reported graduates for the qualification claimed

| Student characteristics | In the final model? |
| --- | --- |
| State | Yes |
| Age | Yes |
| Sex | Yes |
| Indigenous status | No |
| Disability status | No |
| Language spoken at home | No |
| Remoteness (ARIA)1 | Yes |
| Highest qualification before training | Yes |
| VET provider | Yes |
| Field of education | Yes |
| Industry skills council | No (correlated with field of education) |
| Qualification level | Yes |
| Enrolled as part of an apprenticeship or traineeship | Yes |
| Enrolment type2 | Yes |
| Method of answering survey | Yes |

Notes: 1 ARIA = Accessibility–Remoteness Index of Australia.

2 Also known as the Commencing Flag.

# Appendix C

## Regression results

Table C1 Analysis of variance table for variables fitted to final logistic model used to predict   
the eligibility of self-reported graduates for the qualification claimed

|  |
| --- |
| Maximum Likelihood Analysis of Variance |
| Source DF1 Chi-Square Pr > ChiSq |
| Intercept 1 66.79 <.0001  state\_id 7 1754.30 <.0001  SEX 2 149.12 <.0001  age\_s1 5 288.35 <.0001  SECTOR1 2 565.33 <.0001  FOE\_2D 11 1123.54 <.0001  QUAL\_S1 4 1375.65 <.0001  A\_T 2\* 1007.48 <.0001  ARIA 5 76.90 <.0001  fn\_outcm\_s 4 61.27 <.0001  prior\_s5 6 62.60 <.0001  commencing\_flag 1 734.03 <.0001  Likelihood Ratio 3E4 35587.84 <.0001 |

Note: \* Has some levels with few observations. The estimates for these particular levels are unreliable.

Table C2 Model effect estimates for variables fitted in the final logistic model used to predict the eligibility of self-reported graduates for the qualification claimed

|  |
| --- |
| Analysis of Maximum Likelihood Estimates |
| Parameter Estimate1, 2 Standard Error Chi-Square Pr > ChiSq |
| Intercept -1.9206 0.2350 66.79 <.0001  state\_id New South Wales 0.2746 0.0328 69.95 <.0001  Victoria -0.6257 0.0257 594.97 <.0001  Queensland 0.0140 0.0255 0.30 0.5834  South Australia 0.9759 0.0360 735.34 <.0001  Western Australia -0.1800 0.0300 35.99 <.0001  Tasmania -0.6639 0.0589 126.90 <.0001  Northern Territory -0.1331 0.0625 4.54 0.0331  SEX Male -0.0709 0.1985 0.13 0.7208  Female 0.2511 0.1984 1.60 0.2057  age\_s1 15–19 0.4704 0.0471 99.76 <.0001  20–24 0.4807 0.0472 103.35 <.0001  25–44 0.3135 0.0442 50.29 <.0001  45–64 0.0335 0.0455 0.54 0.4610  65+ -0.7870 0.1031 58.28 <.0001  SECTOR1 TAFE and OG 1.1412 0.0971 138.10 <.0001  ACE -1.4192 0.1919 54.67 <.0001  FOE\_2D Natural and Phys 0.2292 0.1379 2.76 0.0964  Information Tech 0.1797 0.0621 8.36 0.0038  Engineering and -0.4528 0.0327 191.82 <.0001  Architecture and -0.2014 0.0498 16.36 <.0001  Agriculture, Env -0.7458 0.0500 222.13 <.0001  Health 0.4301 0.0498 74.70 <.0001  Education 1.0330 0.0537 370.50 <.0001  Management and C 0.1631 0.0277 34.77 <.0001  Society and Cult 0.2689 0.0321 70.39 <.0001  Creative Arts -0.1679 0.0582 8.32 0.0039  Food, Hospitalit -0.5620 0.0374 226.20 <.0001  QUAL\_S1 Diploma or higher 0.9600 0.0298 1040.35 <.0001  Cert IV 0.2615 0.0266 96.63 <.0001  Cert III 0.1363 0.0211 41.76 <.0001  Cert II -0.5620 0.0374 226.20 <.0001  A\_T Yes 0.5475 0.0500 120.03 <.0001  No -0.4342 0.0484 80.39 <.0001  ARIA Major city 0.1439 0.0269 28.54 <.0001  Inner regional 0.1890 0.0297 40.60 <.0001  Outer regional 0.0369 0.0303 1.48 0.2239  Remote -0.2339 0.0551 18.00 <.0001  Very remote -0.2593 0.0581 19.92 <.0001  fn\_outcm\_s Mail-out 0.00162 0.0863 0.00 0.9850  Online 0.1794 0.0873 4.23 0.0501  CATI -0.0465 0.0900 0.27 0.6057  1800 -0.3004 0.3081 0.95 0.3296  prior\_s5 Diploma or higher -0.1006 0.0396 6.44 0.0111  Certificate III/IV 0.0650 0.0380 2.92 0.0875  Year 12 0.1689 0.0372 20.59 <.0001  Year 11/Cert I/II 0.1157 0.0411 7.92 0.0049  Year 10 and below 0.1032 0.0388 7.08 0.0078  commencing\_flag Continuing student 0.3539 0.0131 734.03 <.0001 |

Notes: 1 These effects are presented relative to the final level of each variable; e.g. all state (state\_id) effects are presented relative to the Australian Capital Territory which has an effect of zero, and sex effects are displayed relative to ‘Unknown’.

2 Effects for unknown or missing values of variables are not shown.

# Appendix D

## Comparison of self-reported graduates’ eligibility for the claimed qualification

Table D1 Comparison of self-reported graduates’ eligibility for the claimed qualification from the National VET Provider Collection with their predicted eligibility, 2009 (%)

|  |  |  |  |
| --- | --- | --- | --- |
| Eligibility in VET provider collection | Predicted eligibility | | |
| Eligible | Ineligible | All |
| Eligible | 15.0 | 17.7 | 32.7 |
| Ineligible | 8.1 | 59.2 | 67.3 |
| **All** | **23.1** | **76.9** | **100.0** |

Note: Grey shading indicates that the eligibility status was correctly predicted by the logistic model.

Table D2 Comparison of self-reported graduates’ eligibility for the claimed qualification from the National VET Provider Collection with their predicted eligibility, 2008 (%)

|  |  |  |  |
| --- | --- | --- | --- |
| Eligibility in VET provider collection | Predicted eligibility | | |
| Eligible | Ineligible | All |
| Eligible | 14.4 | 20.5 | 34.9 |
| Ineligible | 7.4 | 57.7 | 65.1 |
| **All** | **21.8** | **78.2** | **100.0** |

Note: Grey shading indicates that the eligibility status was correctly predicted by the logistic model.

Table D3 Comparison of self-reported graduates’ eligibility for the claimed qualification from the National VET Provider Collection with their predicted eligibility, 2007 (%)

|  |  |  |  |
| --- | --- | --- | --- |
| Eligibility in VET provider collection | Predicted eligibility | | |
| Eligible | Ineligible | All |
| Eligible | 13.0 | 15.9 | 28.9 |
| Ineligible | 7.8 | 63.3 | 71.1 |
| **All** | **20.8** | **79.2** | **100.0** |

Note: Grey shading indicates that the eligibility status was correctly predicted by the logistic model.

# Appendix E

## Comparison of survey outputs and modelled estimates

Table E1 Comparison of survey outputs with modelled estimates for graduates on key measures from the Student Outcomes Survey, 2008 (%)

|  |  |  |
| --- | --- | --- |
| Graduates | 2008 survey outputs | Modelled estimates |
| Total reported VET |  |  |
| Employed after training | 80.7 | 82.5 |
| Employed or in further study after training | 89.1 | 91.6 |
| Enrolled in further study after training | 32.8 | 35.8 |
| Fully or partly achieved main reason for doing the training | 87.9 | 87.8 |
| Satisfied with the overall quality of training | 89.0 | 88.1 |
| Of those employed after training |  |  |
| Reported that the training was relevant to their current job | 75.5 | 78.5 |
| Received at least one job-related benefit | 73.0 | 77.5 |
| Of those not employed before training |  |  |
| Employed after training | 48.3 | 53.6 |
| Of those employed before training |  |  |
| Employed after training at a higher skill level | 19.5 | 24.3 |

Note: Grey shading indicates a statistically significant difference at the 95% level when compared with 2008 survey outputs.

Source: Student Outcomes Survey, 2008, unpublished data.

Table E2 Comparison of survey outputs with modelled estimates for graduates on key measures from the Student Outcomes Survey, 2007 (%)

|  |  |  |
| --- | --- | --- |
| Graduates | 2007 survey outputs | Modelled estimates |
| Total reported VET |  |  |
| Employed after training | 81.1 | 82.7 |
| Employed or in further study after training | 89.2 | 91.4 |
| Enrolled in further study after training | 30.8 | 34.0 |
| Fully or partly achieved main reason for doing the training | 86.7 | 86.7 |
| Satisfied with the overall quality of training | 88.8 | 88.2 |
| Of those employed after training |  |  |
| Reported that the training was relevant to their current job | 75.2 | 78.5 |
| Received at least one job-related benefit | 71.4 | 75.6 |
| Of those not employed before training |  |  |
| Employed after training | 49.4 | 54.3 |
| Of those employed before training |  |  |
| Employed after training at a higher skill level | 19.2 | 23.6 |

Note: Grey shading indicates a statistically significant difference at the 95% level when compared with 2007 survey outputs.

Source: Student Outcomes Survey, 2007, unpublished data.

1. This was also the case with data from the 2007 and 2008 surveys (appendix E). [↑](#footnote-ref-1)