

# An analysis of self-reported graduates

TECHNICAL PAPER

*Ben Braysher*

NATIONAL CENTRE FOR  
VOCATIONAL EDUCATION RESEARCH





**Australian Government**

**Department of Industry, Innovation  
Science, Research and Tertiary Education**

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The views and opinions expressed in this document are those of the author and do not necessarily reflect the views of the Australian Government or state and territory governments.

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# About the research

## *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, NCVET



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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 preceding 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
<b>Australia</b>	<b>28.1</b>	<b>4.5</b>	<b>1.5</b>	<b>65.9</b>	<b>100.0</b>
<b>Australia (n)</b>	<b>6 386</b>	<b>1 026</b>	<b>332</b>	<b>14 947</b>	<b>22 691</b>

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
<b>Total</b>	<b>28.9</b>	<b>34.9</b>	<b>32.7</b>	<b>31.4</b>

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
<b>All</b>	<b>22.0</b>	<b>78.0</b>	<b>100.0</b>

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<sup>1</sup>. 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
<b>Total reported VET</b>		
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.

<sup>1</sup> This was also the case with data from the 2007 and 2008 surveys (appendix E).

**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
<b>Total reported VET</b>		
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 characteristics <sup>1</sup>	Eligible	Ineligible
<b>Age</b>		
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
<b>Sex</b>		
Male	28.3	71.7
Female	36.5	63.5
<b>Indigenous status</b>		
Indigenous	28.3	71.7
Not Indigenous	33.0	67.0
<b>Disability status</b>		
With a disability	28.8	71.2
Without a disability	33.3	66.7
<b>Language spoken at home</b>		
Language other than English	31.9	68.1
English	33.0	67.0
<b>Remoteness (ARIA)<sup>2</sup></b>		
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
<b>Highest qualification before training</b>		
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
<b>All respondents (%)</b>	<b>32.7</b>	<b>67.3</b>
<b>All respondents (n)</b>	<b>7 412</b>	<b>15 279</b>
<b>Total estimated population (%)</b>	<b>30.6</b>	<b>69.4</b>
<b>Total estimated population (N)</b>	<b>82 760</b>	<b>187 620</b>

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 characteristics <sup>1</sup>	Eligible	Ineligible
<b>Type of training provider</b>		
TAFE and other government	33.7	66.3
ACE <sup>2</sup>	4.7	95.3
Private providers	26.2	73.8
<b>Field of education</b>		
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
<b>Qualification level</b>		
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
<b>Enrolled as part of an apprenticeship/traineeship</b>		
Yes	48.3	51.7
No	29.0	71.0
<b>Labour force status after training</b>		
Employed	33.8	66.2
Not employed	28.8	71.2
<b>Enrolment type<sup>3</sup></b>		
New enrolment	28.0	72.0
Continuing student	50.5	49.5
<b>Method of answering the survey</b>		
Hard copy	29.8	70.2
Online	37.0	63.0
Telephone	29.8	70.2
<b>All respondents (%)</b>	<b>32.7</b>	<b>67.3</b>
<b>All respondents (n)</b>	<b>7 412</b>	<b>15 279</b>
<b>Total estimated population (%)</b>	<b>30.6</b>	<b>69.4</b>
<b>Total estimated population (N)</b>	<b>82 760</b>	<b>187 620</b>

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**

<b>Student characteristics</b>	<b>In the final model?</b>
State	Yes
Age	Yes
Sex	Yes
Indigenous status	No
Disability status	No
Language spoken at home	No
Remoteness (ARIA) <sup>1</sup>	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 type <sup>2</sup>	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	DF <sup>1</sup>	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		Estimate <sup>1, 2</sup>	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
<b>All</b>	<b>23.1</b>	<b>76.9</b>	<b>100.0</b>

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
<b>All</b>	<b>21.8</b>	<b>78.2</b>	<b>100.0</b>

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
<b>All</b>	<b>20.8</b>	<b>79.2</b>	<b>100.0</b>

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
<b>Total reported VET</b>		
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
<b>Total reported VET</b>		
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.





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