

Worsening employment outcomes for Pacific technical graduate job-seekers

Richard Curtain and Stephen Howes

Abstract

The Australia Pacific Training Coalition (APTC) is a major Australian government foreign aid initiative that commenced in 2008, that has spent over \$350 million, and that has turned out over 15,000 graduates with Australian qualifications. Analysis of graduate tracer surveys shows that employment outcomes for APTC graduates looking for a job (job-seekers) have worsened markedly over the last decade. Graduates from each of the seven Pacific countries for whom there is sufficient data show worsening outcomes over time. Employment outcomes have worsened in part because APTC has changed the composition of courses it offers towards qualifications with weaker employer demand, but mainly because of the falling demand for the trades and hospitality qualifications it has offered since inception. There are worse employment outcomes for female APTC job-seekers. Our analysis suggests that concerns about brain drain are overblown. We suggest the APTC adopt a greater focus on promoting international migration opportunities to improve employment outcomes for their graduates, a more demand-led approach to student admission and course selection, and a review of the quality of graduates.

Worsening employment outcomes for Pacific technical graduate job-seekers*

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* Corrected 1 April 2021 to fix labelling error in Table 1.

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1. Introduction

APTC (the Australia Pacific Training Coalition, formerly Technical College) is a major Australian government foreign aid initiative, commencing in 2008, that has spent over \$350 million, and has turned out over 15,000 graduates with Australian qualifications. Since inception, and through its three phases, TAFE Queensland has played a continuing role in the management of APTC, initially as an individual TAFE institute partnering with a Victorian TAFE institute and later as a state TAFE authority. APTC was set up to address skill shortages in the Pacific, and to provide opportunities for international labour mobility. It is well-known that it has failed on the second objective (Clemens et al. 2014; DFAT 2014), but it was widely thought to have done a good job on addressing domestic skill shortages.

Earlier evaluations of APTC have been critical in relation to the low rate of labour mobility of its graduates to Australia and New Zealand but were positive on APTC's skills and employment outcomes in the Pacific. A 2014 review of the APTC, while cautioning about "lower rates of graduate employment in some fields" (DFAT 2014, p. 50), concluded that overall "employment rates are high among graduates" (p. x). In a recent blog, Satish Chand and Helen Dempster [wrote](#): "As of mid-2019, 12,887 graduates (42 percent women) had trained with APTC, with an overall employment rate of 83 percent."

This paper examines the performance of APTC graduates over time using Graduate Tracer Surveys (GTSs), conducted by APTC annually since 2009. GTS reports are available from 2012 via a search on the current APTC website (see the References list).¹ Various rounds of the GTS have been used before for different evaluations and labour market analyses, as follows. Early GTS results (2011–2014) were used for the independent review (DFAT 2014), quoted above. GTS results for 2015 were provided for an APTC commissioned study of Pacific labour markets. GTS 2016 results were used for the development of the Stage 3 APTC

¹ The publication date of the reports is not always clear. For simplicity, we refer to each report by the year of its survey.

investment concept and design (DFAT 2016; 2017). The most recent GTS data (2017–2019) have been used for the recent APTC Pacific Labour Market Analysis of nine Pacific countries.

All of these analyses present useful snapshots at different points of time. But the real value of the GTS results is to show changes in employment outcomes by qualification over time. That analysis has not been undertaken to date and is the contribution of this paper. One of the authors (Curtain) took part as the labour market analyst for the various projects mentioned in the previous paragraph. In that capacity, he obtained the data from the various GTS rounds from APTC. Whereas these exercises only used a few years of GTS data each, this paper utilises them all.

The next section introduces the GTSs. Section 3 analyses aggregate graduate outcomes and shows the decline in employment over time among APTC graduates. Sections 4 and 5 explain and Section 6 discusses the results. Finally, the conclusion considers the implications for APTC and the Pacific.

2. Data

The number of usable responses for each GTS is shown in Table 1.² The responses for 2009 and 2010 are small (35 and 260, respectively), reflecting the small number of graduates in 2008 and perhaps teething problems in working out how best to contact graduates.³ The analysis that follows starts with 2011 as the first year of reliable GTS surveys.

As per Table 1, all APTC graduates can be divided into “job-seekers” and “job-keepers”. Job-keepers are those who have returned to the same employer they had before APTC and job-seekers are those who have not. A condition of APTC entry has always been prior relevant work experience. Initially the requirement was five years relevant work experience for applicants with trade qualifications. Later, students were admitted for

² The small difference between the numbers in Table 1 and the official numbers found in GTS reports is mostly due to the small reduction in the number of usable responses, caused by lack of key information about the graduate such as qualification or employment status unknown.

³ According to APTC administrative data analysed by DFAT (2014), APTC produced only about 300 graduates in 2008, lifting its number of graduates to over 900 in 2009, over 1,400 in 2010 and 1,200 in 2011.

some non-trade qualifications with a minimum of two years relevant work experience (DFAT 2014, p. 8). This emphasis on prior relevant employment has meant that many APTC students came from and returned to the same employer.⁴ Indeed, many students are sponsored by their employers who pay their fees, and may provide other financial support, as well as guarantee them re-entry after graduation. The combined GTS surveys show that just over half (55%) of graduates are job-keepers.⁵

Table 1: Number of GTS respondents: total, job-keepers and job-seekers

GTS year	All	Job-keepers	Job-seekers	Share of job-seekers
2009	35	25	10	29%
2010	248	167	81	33%
2011	609	419	190	31%
2012	407	277	130	32%
2013	346	217	129	37%
2014	480	260	220	46%
2015	443	253	190	43%
2016	1,550	775	775	50%
2017	522	254	268	51%
2018	723	353	370	51%
2019	895	468	427	48%
Total 2011–2019	5,975	3,276	2,699	45%

By definition, job-keepers are in paid (full-time or part-time) employment after graduation (Figure 3).⁶ To see how easy it is to find a job with an APTC qualification, we

⁴ The job-keeper category includes two groups of graduates reported in the annual GTS results as still with the same employer. These are: 'same company, same job' and 'same company, higher position' (see, for example, APTC 2019 GTS, Table 2).

⁵ Job-keepers are more likely to be working in the public sector (if working), and are older on average, and more likely to be female. For example, in 2019, of those working after graduation, 55% (34%) of job-keepers were in the public (private) sector, compared with 25% (55%) of job-seekers. Job-seekers are also younger. In 2019, 47% (34%) of job-seekers (job-keepers) were in the 25–34 year age group, and 40% (32%) of job-keepers (job-seekers) were in the 35–44 age group. For the years for which we have data (see Table 9), 45% of job-keepers and 38% of job-seekers are female.

⁶ The only exception to this is the tiny number who are engaged in voluntary work with their employer. See footnote 9.

need to look at those who have to find an employer to hire them after they have completed their APTC course, that is, the job-seekers, the other 45% of GTS respondents.

Assessment of employer demand requires focusing on those graduates who are job-seekers after graduation, not on those who have no need to look for a job because they are still with the same employer. If we want to find out how easy or difficult it is for APTC graduates to find work, there is no point looking at those graduates who don't need to look for a job because they already have one. This is not in any way to imply that APTC training provides no value to its job-keepers. However, to examine the value provided, one would need to look at productivity gains to the employer and any increase in wages to the employee now that they are an APTC graduate. These are difficult to measure reliably. The value of the measure we use is that it is easy to observe: APTC graduates can be surveyed to find out whether they need to find a job after graduation, that is, whether they are a job-seeker, and then their success or otherwise in their quest for paid work can be observed.⁷ To the extent that APTC graduates are in full-time paid but temporary and low-skill work (i.e. not benefitting from their APTC qualification), the full-time employment rate for APTC graduates may underestimate the actual employer demand for their qualification.

The methods used by the GTSs to follow up graduates included e-mail, postal services, personal interviews by visit, personal interviews by phone and online completion (APTC Graduate Tracer Survey Report 2012, p. 4). Table 2 shows available information regarding response rates, published by APTC. This is only available for 2012 to 2019. The weighted average response rate for 2012 to 2019 is 52% based on 10,462 graduates surveyed and 5,414 responses (it is unclear why the response rate is so much higher for 2017). There is variation in the weighted average response rates by country aggregated for the years 2012 to 2019, ranging from a high of 62%, 60% and 54% for graduates from Kiribati, Samoa and Fiji, respectively, to a low of 30%, 31% and 37% for Nauru, Niue and Tonga, respectively.

⁷ Note that what we observe is whether a respondent is in work at the time of the survey (not before or after).

Table 2: APTC Graduate Tracer Survey (GTS) response rates (%)

	2012	2013	2014	2015	2016	2017	2018	2019
Reported response rate	39	50	50	41	50	91	56	56

Source: APTC GTS reports

APTC reports and other information indicate that the survey is targeting students who have graduated in the last six to twelve months. In some cases, there has been a larger time gap. This is especially the case in 2016, where it appears that the survey was targeted at students who had graduated in the last two years — this would explain the much larger sample size for this year as per Table 1. However, there is no evidence of the time between graduation and survey changing systematically. Based on descriptions in the GTS report, there is some variation from survey to survey but certainly no upward trend in the time from graduation to survey.

A response rate of half of the population surveyed makes it difficult to know how biased the GTS results are without administrative information on the key characteristics of those who did not respond. The various official reports on GTS results note that the response rate was affected by “changing residential circumstances” of many graduates and “difficulties incurred in accessing students in remote locations”. These two factors are likely to result in a bias in the results reported for the paid employment outcomes variable. The bias is likely to favour graduates who are in jobs, especially job-keepers because they are less likely to have changed their contact details. Also graduates in paid work are more likely to see clear benefits from their APTC qualification and so be more likely to respond to the survey. In sum, the GTS results are likely to over-represent APTC graduates who are in paid employment and under-represent those who are not.

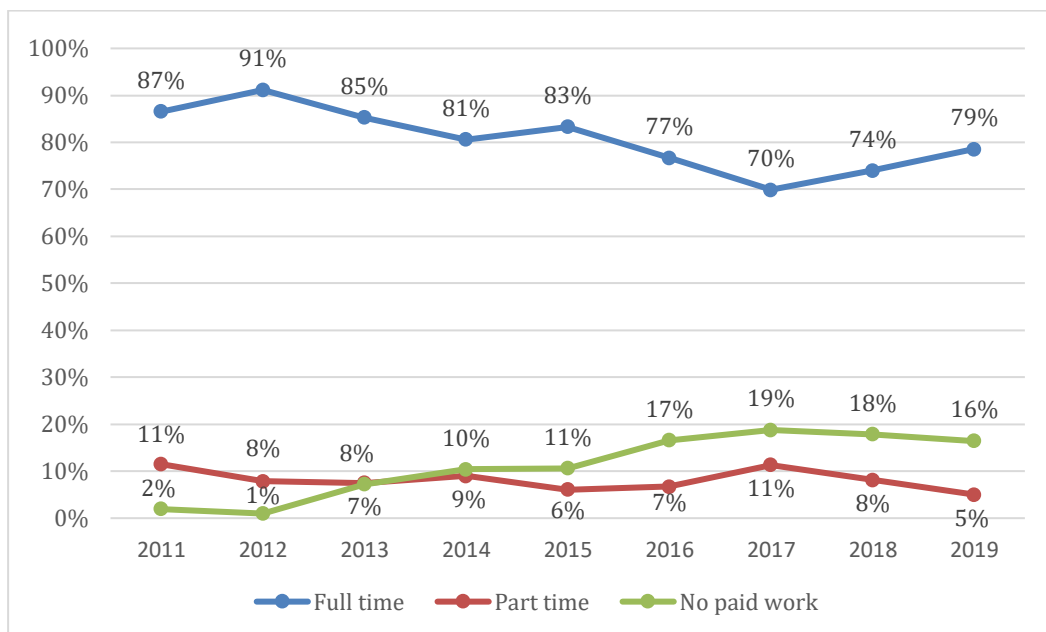
Some of the GTS questions and multiple-choice options have changed over time. Three survey formats have been used: the initial questionnaire (up to 2014); a revised one for the years 2015 to 2017; and a third one introduced in 2018 added some questions to the second version. While differences between these questionnaires exist, there are enough similarities to construct a consistent time series from 2011 to 2019.

To conclude, the GTS surveys, while by no means perfect, provide the best evidence we have on the paid employment outcomes of ATPC graduates. The results over time are broadly comparable and consistent, meaning that examination of a time series over nine years should provide robust results.

3. Demand for graduates

Three paid employment outcomes are possible: full-time employed, part-time employed, and not in paid work.⁸ We start with all graduates (job-keepers and job-seekers combined). Figure 1 shows that the proportion of graduates in full-time employment falls from 87% in 2011 to 79% in 2019. The proportion in part-time work is volatile but falls from 11% to 5% over the same period. The proportion of graduates not in paid work at all rises steeply from 2% in 2011 to 16% in 2019.

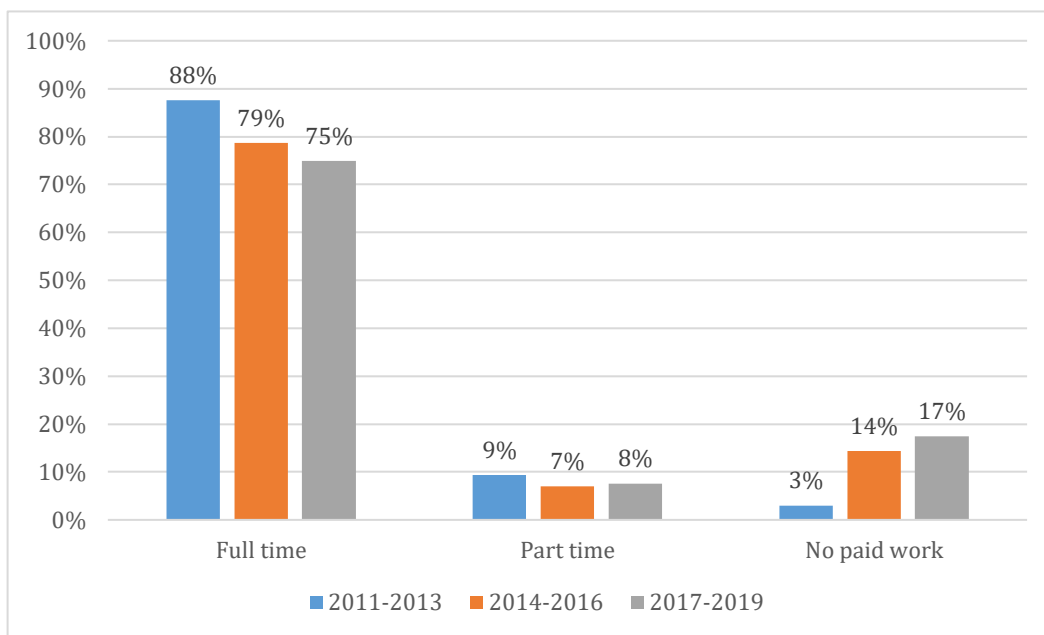
Figure 1: Employment outcomes for all graduates (job-seekers and job-keepers), 2011 to 2019 (%)



⁸ The full-time employment category includes a small number of graduates with both a full-time and a part-time job. The full-time category also includes the self-employed. The part-time employment category includes a small number of graduates in casual work in 2011, 2012 and 2014. Most graduates not in paid work are unemployed, but a small number are working voluntarily.

Since there is some volatility, the next graph shows the same three variables using three-year weighted averages. One can clearly see the fall in those graduates with full-time employment, from 87% in the first three years to 75% in the last three. There is only a marginal fall in graduates with a part-time job. The real increase is in graduates who are not in paid work: their three-year average share rises from just 3% to 17%.

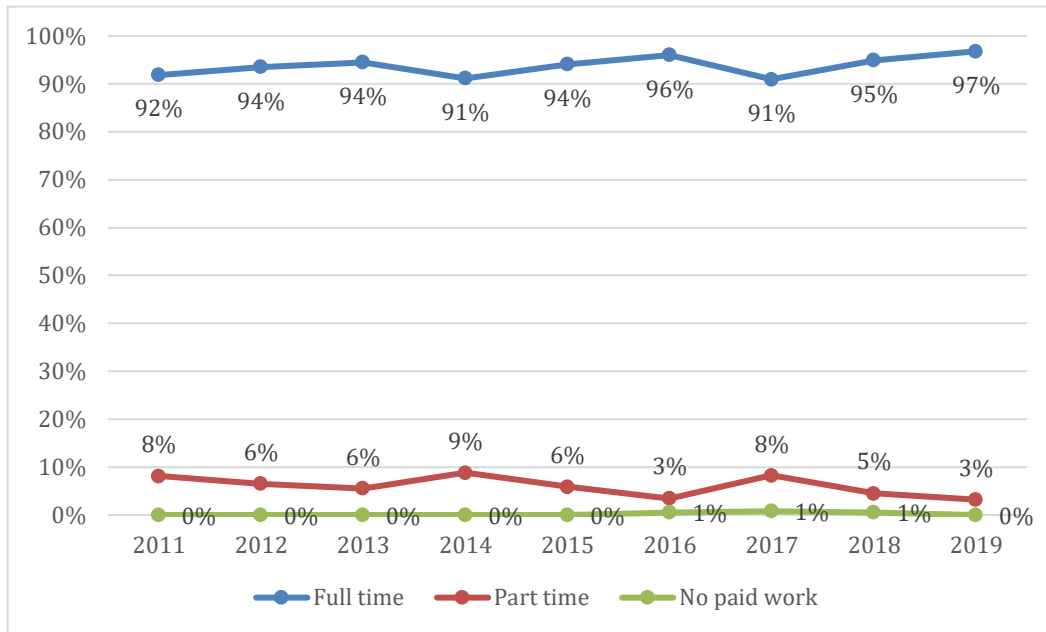
Figure 2: Employment outcomes for graduates (job-seekers and job-keepers), 2011 to 2019, three-year averages (%)



These figures are worrying on their own, but, as discussed earlier, the employment outcomes shown are inflated by those graduates who were already employed before their course and who returned to that employer once they graduated and stayed with that employer — the group we refer to as job-keepers. As Figure 3 shows, their full-time employment rate is high and shows no decline, rising over the decade from 92% to 97%.⁹

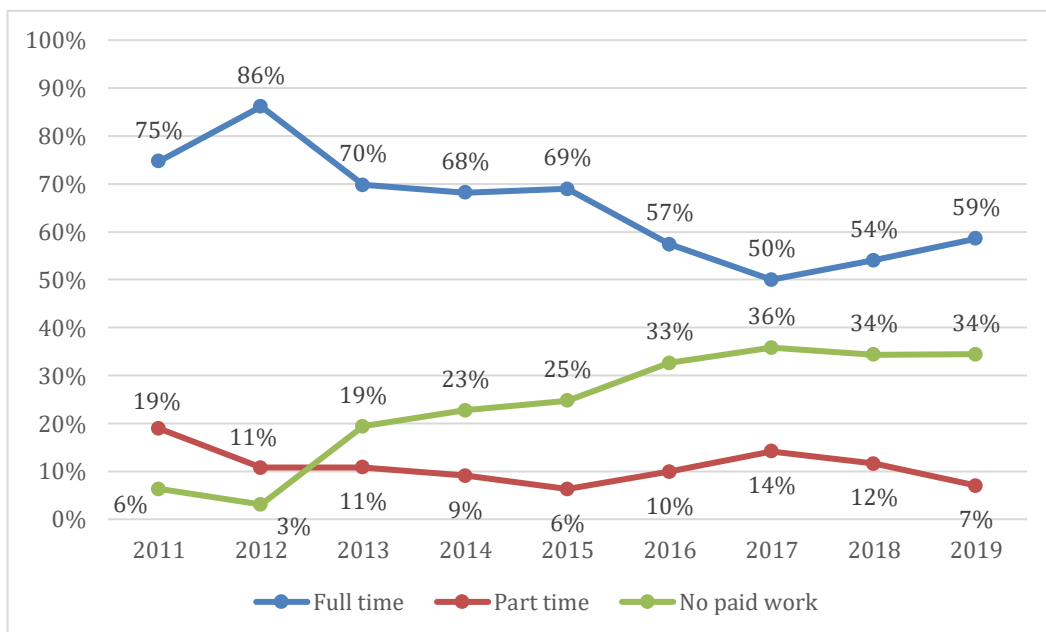
⁹ The miniscule proportion of sponsored graduates not in paid work are volunteering with their employer. There are 8 such individuals, out of 2,699 job-keepers.

Figure 3: Employment outcomes for job-keepers, 2011 to 2019 (%)



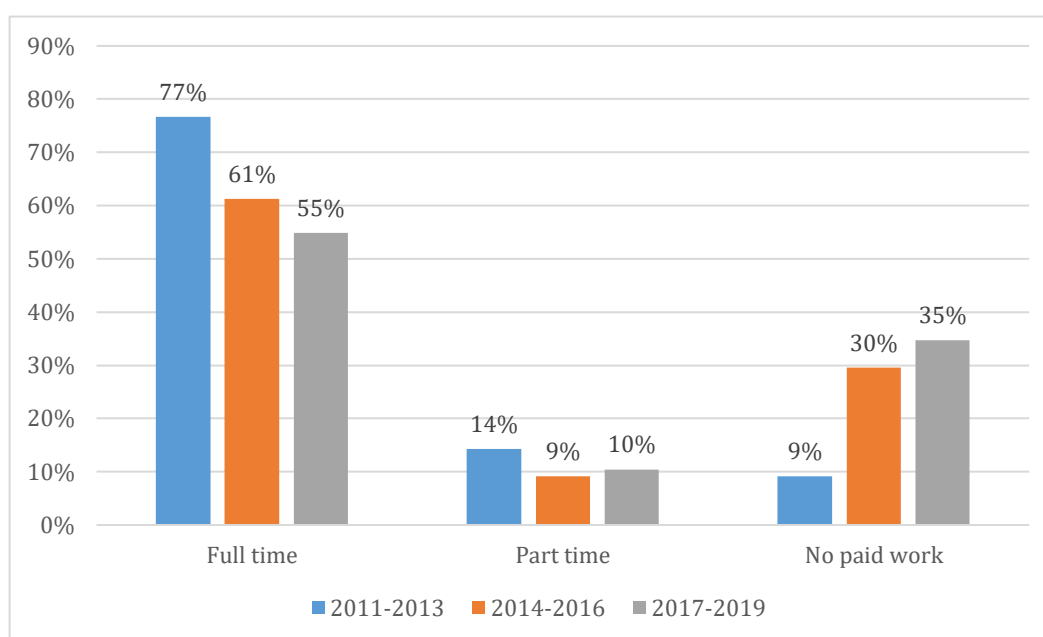
The outcomes from this group hide the real picture regarding the success of APTC job-seekers: that is, APTC graduates who need to find a job. Figure 4 reports on this subset of graduates (as per Table 1, slightly under half of the total).

Figure 4: Employment outcomes for job-seekers, 2011 to 2019 (%)



While the trends are clear and dramatic, to reduce the volatility it is useful again to look at three-year averages (Figure 5).

Figure 5: Employment outcomes for job-seekers, 2011 to 2019, in three-year averages (%)



In 2011–2013, three-quarters of APTC job-seekers were employed at the time of the tracer surveys, but by 2017–2019, only slightly more than half. The share of job-seekers not in paid work at all has increased from one-in-ten to one-third. The decline in full-time employment is highly statistically significant.

This pattern of falling employment among APTC job-seekers is evident for each of seven Pacific countries for which sufficient data is available. Table 3 below presents data on job-seeker graduate employment outcomes by country of residence for 2011–2015 and 2016–2019, for those countries which have at least 30 respondents in each sub-period. The table shows that the full-time employment rates of job-seeking graduates resident in each country have fallen significantly between these two time periods. Conversely, the not-in-paid-work rates increased markedly for each country of residence. The increase in the not-in-paid-work group is 20 percentage points or more for PNG (27 percentage points), Vanuatu (20), and Samoa (20); 10 percentage points or more for Fiji

(14 percentage points) and Kiribati (19); and almost 10 for Tonga (9 percentage points) and Solomon Islands (8).

Table 3: Employment outcomes of job-seekers by country of residence (%)

	2011–2015				2016–2019			
	Full time	Part time	No paid work	N	Full time	Part time	No paid work	N
Fiji	70%	12%	18%	252	62%	6%	32%	655
Kiribati	71%	16%	13%	31	54%	14%	32%	79
PNG	75%	10%	16%	173	49%	9%	43%	373
Samoa	85%	5%	10%	129	67%	3%	30%	238
Solomon Is	56%	18%	26%	91	41%	25%	34%	265
Tonga	71%	12%	18%	34	55%	18%	27%	33
Vanuatu	77%	11%	12%	119	54%	13%	32%	157

Of course, it is not surprising that not all job-seekers are employed at the time of the tracer survey. After all, the search for employment takes time. That said, one might expect most graduates who are going to find paid work after graduation to have done so within the 6–12 month period after graduation within which the GTS targets former students. Moreover, our focus is not so much on levels as on trends.¹⁰

4. Changing composition of qualifications

The significantly falling employment rate over time of APTC graduates who are job-seekers could be the result of either or both of two factors relating to employer demand. One is a compositional effect. We know that APTC introduced new qualifications over time, diversifying away from the traditional trades qualifications during its second stage which commenced in mid-2011. Perhaps these newer qualifications had lower employer demand. The other is an absorption effect. APTC may be continuing to offer long-established qualifications above and beyond domestic employer demand for these

¹⁰ It would be also of interest to know how APTC employment rates compare to those of similar institutions in Australia. Unfortunately, an informative comparison is not possible because of the predominance of the apprenticeship model in the Australian system which is not used by APTC for the equivalent qualifications.

qualifications, over-supplying the markets they are serving. The next two sections explore these two explanations.

The categorisation of ATPC qualifications into Stage 1 and Stage 2 is shown in Table A2. Table 4 shows the share of those graduates with Stage 2 qualifications (qualifications introduced during APTC’s second stage). The share of graduates with Stage 2 qualifications has risen from zero in 2011 to 41% in 2019. Graduates with Stage 2 qualifications are more likely to be job-keepers; their share among total job-keepers is 24% and among job-seekers only 19% (22% for all graduates).

Table 4: The share of graduates with Stage 2 qualifications (%)

	All	Job-keepers	Job-seekers
2011	0%	0%	0%
2012	0%	0%	0%
2013	6%	6%	5%
2014	19%	22%	15%
2015	18%	17%	20%
2016	21%	22%	19%
2017	27%	30%	25%
2018	37%	48%	27%
2019	41%	52%	29%
Total	22%	24%	19%

Figure 6 shows that job-seekers with Stage 2 qualifications face far worse employment outcomes than those with Stage 1 qualifications.¹¹ The graph begins in 2014 since before then there were only negligible numbers of Stage 2 graduates (that is, graduates with Stage 2 qualifications — a shorthand used in the analysis that follows). While sample sizes are of course smaller once we focus on sub-groups such as job-seekers with Stage 2

¹¹ Interestingly, the all-graduate (job-seeker and job-keeper combined) result actually shows that graduates with Stage 2 qualifications have better employment outcomes than those with Stage 1 qualifications. But this is simply because a higher share of Stage 2 graduates are job keepers, and shows the meaninglessness of using the employment outcomes of all graduates including job-keepers as a test of the employability of APTC graduates.

qualifications, they are still large enough to make comparisons (see Table A1 for a listing of all relevant sample sizes by year).

Figure 6: Share of job-seekers with Stage 1 and Stage 2 qualifications in full-time employment (%)

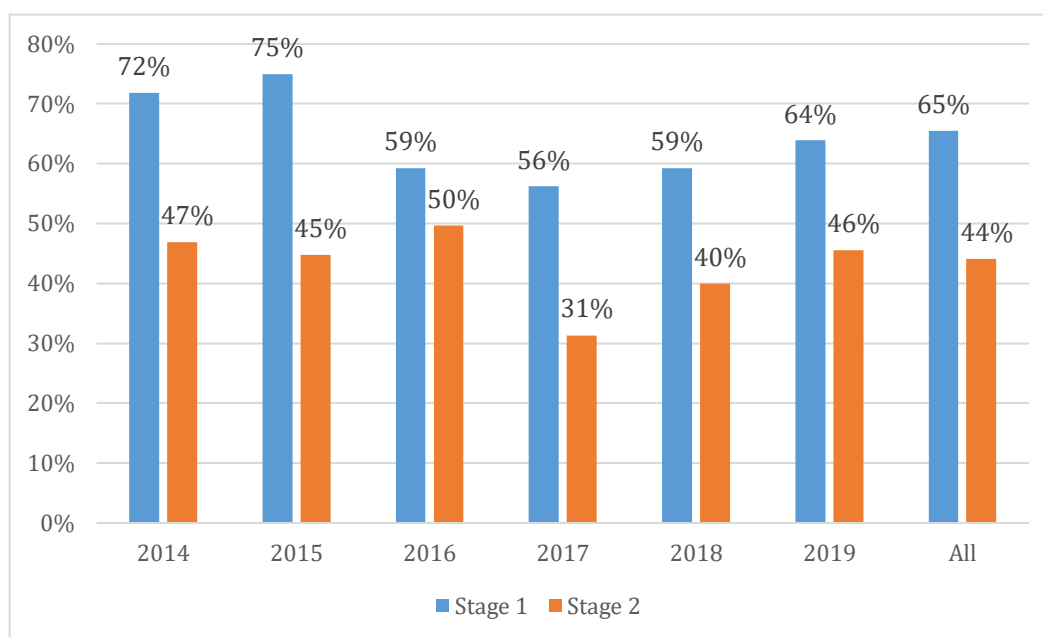


Table 5 shows just how weak employment outcomes are for Stage 2 job-seekers. Over all the surveys, we have 519 job-seeker graduates with Stage 2 qualifications and 2,180 job-seeker graduates with Stage 1 qualifications. The latter have a full-time employment rate of 44%, the former 65%. The difference is highly statistically significant. For job-seekers with Stage 1 qualifications, for every one out of paid work at the time of the tracer study, three are in paid work. For job-seekers with Stage 2 qualifications, there are only 1.2 in paid work for every one out of work.

Table 5: Employment outcomes for job-seekers with Stage 1 and Stage 2 qualifications, 2011–2019

Qualification	Full time	Part time	No paid work
Stage 1	65%	10%	25%
Stage 2	44%	12%	44%

To illustrate these differences, we can look at individual courses. Table 6 below shows the employment outcomes for graduates for all courses for which there are at least 100 job-seekers included in the GTSs with Stage 1 qualifications, and 30 with Stage 2 qualifications (the different thresholds are required because there are more graduates with Stage 1 than Stage 2 qualifications). The table is in ascending order in terms of the share of job-seeking graduates in full-time work. All five of the qualifications with the worst full-time employment outcomes are Stage 2 qualifications. These are also the five (the only five) with full-time job-seeker employment rates below 50%. Fewer than a quarter of the individual support (aged care) qualification job-seeker graduates are in paid work, and only one-third of the community service graduates are.

Table 6: Employment status of job-seekers in 2011–2019 by select qualifications (%)

Course	Stage	Full time	Part time	Not in paid work	Total
C3 in Individual Support (Ageing, Home and Community)	2	23%	7%	70%	117
C3 in Community Services	2	33%	28%	39%	36
C3 in Early Childhood Education and Care	2	37%	16%	47%	51
C4 in Youth Work	2	40%	18%	42%	103
C4 in Disability	2	49%	9%	43%	35
C3 in Hospitality	1	55%	5%	40%	242
C3 in Engineering - Fabrication Trade	1	63%	13%	24%	150
C3 in Carpentry	1	64%	15%	22%	218
C3 in Commercial Cookery	1	65%	8%	28%	206
C3 in Light Vehicle Mechanical Technology	1	67%	6%	27%	168
C4 in Training and Assessment	1	67%	9%	24%	103

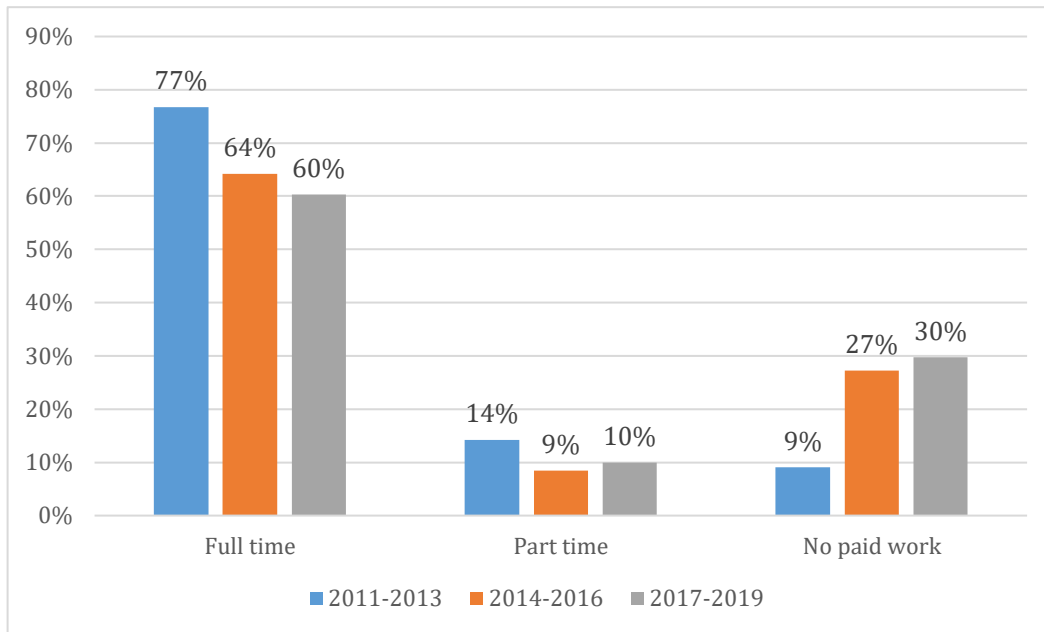
Notes: Only qualifications with at least 100 (30) GTS respondents are shown for Stage 1(2). 'C3[4]' is Certificate III [IV]. The 'Stage' (1 or 2) is the stage of APTC during which the qualification was introduced.

5. Reduced absorption

While the diversification away from trades and hospitality courses is one factor that explains worsening employment outcomes for APTC job-seekers, it is not the only factor, and indeed is not the most important one. Most APTC graduates have undertaken Stage 1 qualifications, and it is the decline in employment rates among graduates with these trades and hospitality qualifications that is the most important factor driving the

worsening employment outcomes. Figure 7 shows the worsening employment outcomes among APTC job-seekers with Stage 1 qualifications.

Figure 7: Employment outcomes for job-seekers with Stage 1 qualifications (%)



The deterioration is not quite as bad as it is for Stage 1 and 2 qualifications combined, but it is substantial (and statistically significant). For example, the share in full-time employment for Stage 1 job-seekers declines from 76% on average in 2011–2013 to 60% on average in 2017–2019 (compared to a decline from 76% to 55% for all job-seekers, Stage 1 and 2 combined). The share of Stage 1 job-seekers ‘not in paid work’ increases over the same period from 9% to 30%, compared with 9% to 35% for all job-seekers.

We can illustrate the worsening employment outcomes for APTC job-seekers with Stage 1 qualifications by looking at specific qualifications for two time periods. Table 7 shows employment outcomes comparing 2011–15 and 2016–19 for all Stage 1 qualifications with a sample size for each qualification for the two periods of at least 30.

Table 7: Employment outcomes of job-seekers by select Stage 1 qualification (%)

	2011-15				2016-19			
	Full time	Part time	Not in paid		Full time	Part time	Not in paid	
			work	Total			work	Total
C3 in Carpentry	66%	22%	11%	89	63%	16%	21%	184
C3 in Commercial Cookery	78%	11%	11%	119	62%	7%	31%	172
C3 in Engineering - Mechanical Trade (Fitting and Machining)	79%	3%	18%	33	48%	5%	47%	60
C3 in Engineering - Fabrication Trade	68%	20%	13%	40	63%	11%	26%	127
C3 in Hospitality	74%	7%	19%	133	51%	6%	43%	191
C3 in Light Vehicle Mechanical Technology	89%	4%	8%	53	63%	6%	31%	143
C3 in Tourism	72%	5%	23%	64	58%	6%	36%	69
C4 in Training and Assessment	88%	8%	3%	60	66%	8%	26%	89

Notes: Only qualifications with at least 30 GTS respondents in each of the two time periods are shown. 'C3[4]' is Certificate III [IV].

All eight qualifications show a decline in the full-time employment rate and a rise in the not-in-paid-work rate. The rise in the not-in-paid-work rate is always greater than 10 percentage points, and often much greater. The fall in the full-time employment rate is greater than 10 percentage points in every case except two: carpentry, and fabrication. The largest decline in the full-time employment rate for job-seekers is in the fitting and machining qualification where the fall is from 70% to 48%. The falls in the full-time employment rate of job-seekers in light vehicle mechanics, and training and assessment are both above 20 percentage points.

6. Discussion

Which of these two factors — a changing composition of courses, or a falling absorption rate of graduates — is the more important? We can decompose the fall in employment outcomes using the convenient fact that prior to 2014, there were an insignificant number of Stage 2 graduates: for 2011–2013, only 1.3% of job-seekers surveyed had Stage 2 qualifications. We can then say that if Stage 2 courses had not been introduced, job-seeker employment outcomes would be entirely explicable in terms of changing demand for graduates with Stage 1 qualifications. Any deviation between all and Stage 1 job-seeker employment outcomes can then be attributed to the new qualifications introduced in Stage 2.

Using this methodology, Table 8 below shows the decomposition of the change in employment outcomes. It shows that the most important factor by far is the deteriorating employment outcomes among job-seekers graduating with Stage 1 qualifications. The diversification to Stage 2 qualifications, while bad for job-seeker employment outcomes,

only plays a minor role. For example, it explains only one-quarter of the fall in the full-time-employed share, less than one-fifth of the rise in the not-in-paid-work share, and less than 10% of the decline in the part-time employed share.¹² This is not a surprising result given that only about 20% of graduates have Stage 2 qualifications (Table 4).

Table 8: Decomposing the changing employment outcomes among job-seekers

	Decline/increase b/w 2011–2013 and 2017–2019 (in percentage points)	Due to	
		... worse employment outcomes among job- seekers with Stage 1 qualifications (%)	... introduction of Stage 2 qualifications (%)
Full time	-22	76%	24%
Part time	-4	111%	-11%
Not in paid work	26	81%	19%

Without further evidence, we cannot provide a definitive explanation for the declining demand for job-seekers with Stage 1 qualifications. One hypothesis is that earlier APTC recruitment rounds scooped up the best workers who found it easy to find jobs after graduation. As the years went by, and APTC worked its way down the merit list (and some employment entry requirements were reduced), then it would have been training less capable and experienced workers who would have found it more difficult to find work after graduation.

Another hypothesis is that APTC with its set intakes for long-established courses has a high risk of oversupplying graduates for the available domestic demand. This is to be expected for Pacific countries which have small wage-based economies. It may even apply to Fiji with its much larger formal economy. The high levels of unemployment and under-employment for the graduates of a range of APTC qualifications suggest that domestic labour markets in the Pacific cannot absorb a continuous flow of post-school graduates with the same qualifications.

¹² The share in part-time work actually improves slightly because of the introduction of Stage 2 courses.

A third hypothesis is that employment processes have become more complex, and job search times longer, so APTC graduates are as likely to end up in work, but after a longer period.

We dismiss the third hypothesis due to lack of plausibility. Is it then that APTC is turning out too many graduates (the second hypothesis), or graduates of decreasing quality (the first hypothesis)? We cannot say. On the one hand, there is a widespread consensus that there are skill shortages in the Pacific. For example, in its 2008 publication *Skilling the Pacific*, the Asian Development Bank writes that “Skills formation has ... become a priority in countries of the Pacific where job growth and emigration have created skills shortages” (p. xvii). On the other hand, APTC is the region’s premier technical training institution. If its job-seeking graduates are finding it increasingly difficult to find work, it is hard to believe that technical skills shortages are widespread across the Pacific.

There is an interesting and important gender dimension to the above findings. It seems likely that APTC diversified away from trades and hospitality to improve gender outcomes, since the trade courses are dominated by male students. We only have access to gender data in the GTSs for 2015, 2017, 2018 and 2019. For these years, 56% of female but only 17% of male respondents graduated with a less-employable Stage 2 qualification.

For the years for which we have gender data (2015 and 2017–2019), 42% of graduates responding to the GTS were females (Table 9). As well, 41% of employed respondents were also female. This looks like reasonably equal employment outcomes for men and women, but it reflects the fact that a lower share of female than male APTC graduates are job-seekers and so don’t have jobs lined up for them on graduation: 44% for women versus 52% for men. If we focus on job-seekers, who have to compete in the labour market, we can see that women graduates were not able to compete as well as men, for two reasons.

First, so many more females graduated with a less-employable Stage 2 qualification. Half of female job-seekers (49%), compared to only 12% of male job-seekers, completed a

Stage 2 qualification, which gave both males and female job-seekers alike only roughly a 50% chance of finding employment by the time of the tracer survey.

Second, female job-seekers with Stage 1 qualifications were more likely to find employment than those with Stage 2 qualifications, but still struggled in the labour market relative to their male counterparts. At the time of the surveys, 75% of male but only 62% of female Stage 1 job-seekers were in paid work.

Together, these factors explain why for these years, while just over one-third (38%) of all job-seekers are females, half (49%) of job-seekers not in paid work are female.

Table 9: Gender disaggregation for 2015 and 2017–2019 combined

	Share of female graduates in ...			Composition by qualification type		Employment rates among graduates			Sample size
	Paid emp't	Not in paid work	Graduates	Male	Female	All	Male	Female	
All graduates									
All qualifications	41%	49%	42%	100%	100%	84%	86%	81%	2578
Stage 1	26%	36%	28%	83%	44%	85%	87%	81%	1717
Stage 2	70%	72%	70%	17%	56%	81%	82%	81%	861
Job-seekers									
All qualifications	33%	49%	38%	52%	44%	67%	72%	57%	1252
Stage 1	23%	36%	26%	88%	51%	72%	75%	62%	922
Stage 2	73%	71%	72%	12%	49%	52%	51%	53%	330

Note: Under 'Composition by qualification type' the percentage in the row 'All qualifications' under 'Job-seeker' is the share of job-seekers in all graduates. The employment rate is the share in full-time or part-time paid work.

7. Conclusion

This paper looks at the changing employment fortunes of the almost half of APTC graduates who do not have a job to return to when they graduate. This is not to imply in any way that these job-seekers are the only APTC graduates who matter. Obviously not. However, the simple question we seek to answer in this paper is how successful APTC graduates who need to find work are in finding a job. Obviously, this employability test can only be applied to those who don't have a job to start with. While the findings cannot

constitute a complete evaluation of APTC outcomes, the advantage to our approach is that employability is much easier to quantify than productivity gains, which would need to be measured to estimate the gains to job-keepers. Certainly, if APTC graduates without a job to return to are finding it more difficult to find work, that must be a source of concern.

The analysis clearly shows worsening employment outcomes for the job-seeking graduates of the Pacific's premier technical training institute. The share of job-seekers in full-time employment at the time of the tracer survey has fallen from 76% for 2011–2013 graduates to 55% for 2017–2019 graduates (the fall of 22 percentage points, after rounding, in Table 8). The share of such graduates not in paid employment at all has risen over the same period from 9% to 35% (the rise of 26 percentage points in Table 8).

We have also shown that the main reason for this is falling demand for traditional trade and hospitality qualifications: a fall in demand relative to supply for graduates such as electricians, cooks and vehicle mechanics. A secondary reason is the diversification away from these qualifications to other courses with even less employer demand.

The findings presented in this paper — that APTC job-seekers are indeed finding it increasingly difficult to find a job — have important implications for Pacific island country governments as well as for the Australian government. For the former, the findings challenge the dominant thinking that the Pacific suffers from technical skill shortages. We cannot be certain, but the analysis presented in this paper is consistent with the notion that fears of brain drain in middle-level skill areas are overblown. While the situation varies from sector to sector, in general, the findings suggest that Pacific countries have a growing excess of middle-level skilled and semi-skilled labour relative to domestic opportunity. If so, Pacific governments should embrace the employment opportunities provided by labour mobility. More experienced staff may leave, but there are others trained to take their place.

The Australian government, for its part, needs to ask why APTC job-seeking graduates are increasingly struggling to find employment in their domestic labour markets. The fact that they do struggle makes it all the more important that Pacific technical graduates are connected with overseas labour markets. According to a 2019 APTC end-of-course

survey, nine out of ten recent APTC graduates intend to seek work overseas, mostly in Australia. So far, however, the number of APTC graduates migrating has been negligible, only 3.5% of the graduates surveyed by the 2019 GTS. In its most recent, third phase, APTC has been given a more explicit labour mobility mandate and has been told to create a dedicated labour mobility track to help graduates migrate overseas for work. While some steps have been taken in that direction, for example in the area of aged care, there is much more the APTC could do to link its graduates with Australian employers and help them access existing visa streams for temporary skilled work.

To boost employment outcomes, the Australian government would also be well advised to instruct APTC to make decisions regarding course selections and sizes based more on considerations of demand. Some hard decisions may need to be taken to shut down or greatly reduce intakes in certain courses where the benefits in terms of limited paid employment simply do not justify the high level of expenses involved in running an APTC course. One immediate step that could be taken is to provide APTC applicants with information about the labour market outcomes for its qualifications for those who do not have an employer to return to.¹³ This information, not currently in GTS reports, should be published there.

Longer term, as noted by the APTC design for Stage 3, the Australian government needs to help APTC move away from being overwhelmingly reliant on donor funding.¹⁴ More funding from national governments, businesses, and students themselves would all reorient APTC towards being more demand responsive.¹⁵

In summary, supplying Australian qualifications for middle-level skills into increasingly saturated local markets where graduates find it more difficult to find a job makes little

¹³ The limiting factor is sample size. Given current response rates, annual tracer surveys results for specific countries would need to be combined to provide this information. More attention could also be given to increasing the GTS response rate in each country, with the aim of achieving a minimal sample response for the largest qualifications in the main campus countries.

¹⁴ For details, see the section on co-investment in the APTC Design for Stage 3 in DFAT (2017, pp. 40-41).

¹⁵ In Fiji, families can gain a loan from their provident fund to cover the cost of tuition for post-school qualifications. Other national loans arrangements could be set up where there are national provident funds, such as in Vanuatu and Samoa.

sense. The keys to better employment outcomes for the Pacific, and for Pacific technical colleges, are qualifications geared to meeting both domestic demand and labour mobility. The latter needs to be based on greater efforts to connect graduates with Australian employers, and help to access existing visa streams, especially in relation to temporary skilled work visas.

Table A1: Sample size summary

	ALL QUALIFICATIONS			STAGE 1 QUALIFICATIONS			STAGE 2 QUALIFICATIONS		
	All	Job-keepers	Job-seekers	All	Job-keepers	Job-seekers	All	Job-keepers	Job-seekers
2011	609	419	190	609	419	190	0	0	0
2012	407	277	130	406	276	130	1	1	0
2013	346	217	129	326	203	123	20	14	6
2014	480	260	220	390	202	188	90	58	32
2015	443	253	190	362	210	152	81	43	38
2016	1550	775	775	1231	607	624	319	168	151
2017	522	254	268	379	178	201	143	76	67
2018	723	353	370	454	184	270	269	169	100
2019	895	468	427	527	225	302	368	243	125
TOTAL	5975	3276	2699	4684	2504	2180	1291	772	519
2011-2013	1362	913	449	1341	898	443	21	15	6
2014-2016	2473	1288	1185	1983	1019	964	490	269	221
2017-2019	2140	1075	1065	1360	587	773	780	488	292

Table A2: Categorisation of all qualifications into Stage 1 and Stage 2

Course	Stage	All	Non-affiliated
C3 in Hospitality	1	654	308
C4 in Training and Assessment	1	602	138
C3 in Commercial Cookery	1	515	272
C3 in Carpentry	1	492	269
C3 in Light Vehicle Mechanical Technology	1	329	195
C3 in Tourism	1	243	122
C3 in Children Services	1	240	65
C3 in Engineering - Fabrication Trade	1	257	166
C3 in Engineering - Mechanical Trade (Diesel Fitting)	1	223	108
C3 in Electrotechnology Electrician	1	210	87
C3 in Engineering - Mechanical Trade (Fitting and Machining)	1	186	90
C3 in Painting and Decorating	1	126	74
C3 in Plumbing	1	125	52
C4 in Hospitality	1	94	47
C3 in Wall and Floor Tiling	1	86	49
C3 in Engineering - Mechanical Trade (Refrigeration & Air Conditioning)	1	81	43
C3 in Patisserie	1	72	45
C3 in Hairdressing	1	68	28
D Children's Services (Early Childhood Education and Care)	1	42	12
D Community Services	1	39	10
TOTAL		4684	2180
C4 in Leadership and Management	2	218	24
C3 in Individual Support (Ageing, Home and Community)	2	175	117
C4 in Youth Work	2	148	103
C3 in Early Childhood Education and Care	2	122	51
C4 in Disability	2	93	37
C3 in Applied Fashion Design and Technology	2	73	19
C3 in Education Support	2	70	15
C3 in Community Services	2	61	36
D Management	2	55	12
C3 in Disability	2	51	22
C4 in Community Development	2	45	22
C4 in Applied Fashion Design and Merchandising	2	43	14
C4 in Business	2	35	4
C3 Allied Health and C3 Health Care Assistance	2	27	7
C3 Formwork/Falsework	2	19	13
C2 in Construction	2	12	7
C3 in Health Services Assistance	2	11	1
C4 in New Small Business	2	11	3
C3 Pathways to Further Study	2	9	6
C3 Nutrition and Dietetic Assistance	2	7	2
C2 in Automotive Servicing Technology	2	4	4
C3 in Catering Operations	2	1	0
D Vocational Education & Training	2	1	0
TOTAL		1291	519

Note: 'C3[4]' stands for 'Certificate III[IV]', and 'D' for 'Diploma in'.

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