

How do Students Crediting their Learning from VET to Higher Education Perform?

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Abstract

Polytechnic West offers both VET and Higher Education courses – mainly associate degrees. The HE courses have pathways that enable students to enrol with advanced standing from VET diploma and advanced diploma courses in aligned disciplines. The assumption is that the VET pathways help students to progress without unnecessarily duplicating their learning.

This paper presents findings from a project that assesses the performance of students who have been given advanced standing from either a VET diploma or advanced diploma course and comparing their outcomes to those of students who embarked on higher education studies without advanced standing.

Finally, the paper compares the performance of students who have progressed by the Associate Degree pathway to a university Bachelors degree, contrasting the performance of students who completed their associate degree with cross credits from their VET studies with those who studied all units within their associate degree.

The analysis of data in this project challenges current models for determining equivalence of learning outcomes and proposes that the current focus on assessing competency in VET qualifications does not fully prepare students to engage successfully in higher education courses at advanced levels.

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Introduction

Polytechnic West is a State Training Provider (STP) of vocational education and training (VET) courses in Western Australia. It also has been a registered higher education provider since 2007 and currently offers 9 Associate Degrees and two higher education diplomas. The higher education courses are all full-fee paying and do not receive any government subsidies.

When higher education course delivery commenced delivery it was with two associate degrees that were based on strong pathways from VET diploma and advanced diploma courses. The Associate Degree of Business gave students who enrolled after having completed the Diploma of Management or a Diploma of Business exemptions for their previous study; their enrolment with advanced standing was equivalent to 6 months to one year of their Associate Degree course. Students from the Advanced Diploma in Hospitality Management received the equivalent of 18 months advanced standing meaning they could complete their associate degree with only 6 months of further study. Students entering the Associate Degree of Hospitality Management from a Diploma in Hospitality received the equivalent of one year's advanced standing.

As Polytechnic West developed more associate degree programs for its higher education portfolio, the willingness to provide VET to Higher Education pathways that maximised student's opportunities to continue with their learning was maintained. The Associate Degree of Aviation, when initially introduced, gave a typical student entering with the Diploma of Aviation between 8 and 9 units-worth of advanced standing which was equivalent to just over 1 year's credit.

The niche Associate Degree of Fashion Business first offered in 2012, gave students one year – eight units – of credit exemptions while the highly technical Associate Degree of Network Technology first offered in 2011, gave students credit recognition for between 4 and 6 units.

As noted by Brogan (2013) of Edinburgh Napier University in Scotland awarding students exemptions through advanced standing has many potential benefits to students and the institution. For the institution it:

- widens its role in enabling knowledge dissemination by creating a broader pool from which to draw students
- supports the development of a wider range of articulation pathways with feeder institutions
- provides a broader range of student pathways for entry into higher education courses
- responds to government policy initiatives by assisting students to engage in lifelong learning.

For students, enrolment with advanced standing it:

- recognises their achievement and boosts their self esteem
- reduces their need to unnecessarily duplicate learning
- facilitates their career development and progression to higher learning
- supports labour market entry and mobility through the provision of various entry and exit points
- widens career choices
- reduces the time and cost of gaining qualifications

According to research into student decision making regarding studies at Victoria University (Milne et al., 2008), about half of the students applying for academic credit do so in order to reduce their study period. In making their decision to seek academic credit, however, the researchers found that students did not always consider the consequences of the decision. They identified a number of potential negative impacts of gaining credit exemptions, for example:

- having poor matches between the achieved learning and exemptions granted which slowed student progress
- creating situations where students struggle to 'catch up' as a result of gaps in their learning
- students having regrets about seeking academic credit.

The Victoria University research suggested that many eligible students did not apply for advanced standing because of concerns that it could "compromise their learning in a new VE or HE course" (Milne et al., 2008, pv).

At Polytechnic West, anecdotal evidence suggests that many students enrol with advanced standing as a way of reducing the financial burden by limiting their study load through to course completion. Consequently, this research intends to identify the true proportion of students enrolling with advanced standing at Polytechnic West and to review their outcomes and results. It compares the results achieved by those students studying with advanced standing and those who did not get any academic credit from previous study. Further, the intention is to identify how students who go on to further study at university perform after enrolling with advanced standing based on completion of their associate degree.

Method

The enrolment and academic results of all students enrolled at Polytechnic West between 2007 and 2012 were collated and analysed. The results were grouped by enrolled course of study and then analysed to determine:

- the average number of exemptions given as credits for units of study in their chosen associate degree course
- the average number of units failed throughout the period of study
- The average Grade Point Average (GPA) gained based on the GPA weighting used by PWA's major articulating partner university
- the percentage of students graduating from the course
- the percentage of student enrolling in the course with advanced standing

Statistical significance tests (t-test) were undertaken on the average GPA results to determine whether any differences in average GPA were statistically significant.

Data for the 2012 cohort enrolled in university study – at bachelor degree level – was also obtained from one of Polytechnic West's key articulating pathway universities. This provided data on:

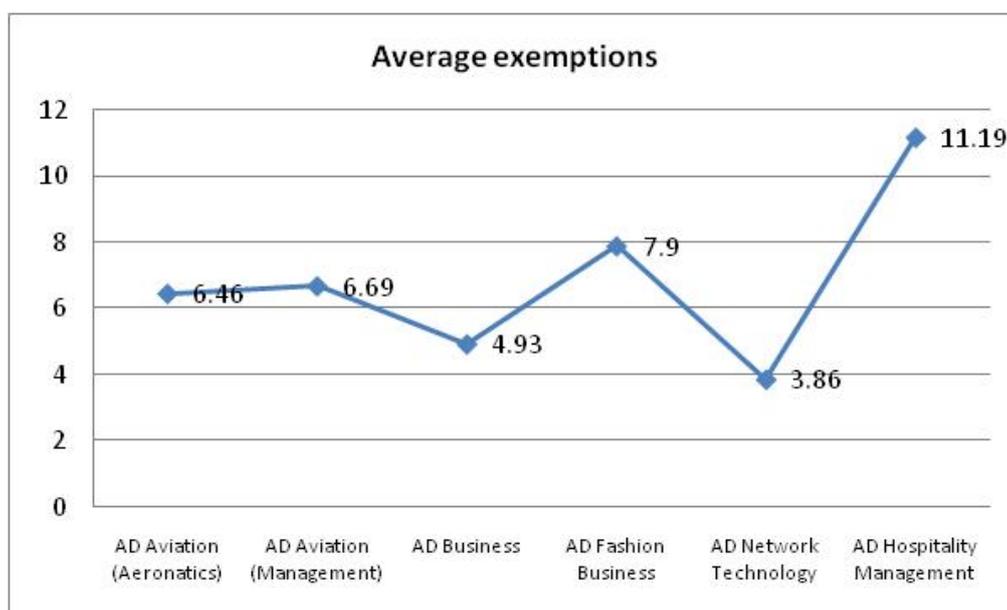
- the PWA course the student was gaining advanced standing for
- the university course in which the student enrolled
- the GPA achieved in 2012

As the university provided no individual student information, it was not possible to data match students to their PWA study. In addition to only generalised data being available, the sample size was small so results may be treated with some caution.

Results

Exemptions are awarded for VET study undertaken prior to enrolling in any of Polytechnic West's associate degrees. The amount of credit given as advanced standing varies across the courses PWA offers; however, the average number of exemptions given is 6.84 units which is equivalent to 87.5% of the student's first year of study.

One course, the Associate Degree of Hospitality Management stands out from the others. In this course, students who complete the VET Advanced Diploma in Hospitality Management get 18 months equivalent credit meaning they only have to complete a further 6 months of higher education study to gain their associate degree qualification.



From 2007 to 2012, between 25% and 65% of students enrolled with advanced standing. The course with the lowest percentage of students enrolling with advanced standing (25%) was the Associate Degree of Aviation (Aeronautics) while the course with the highest percentage of students enrolling with advanced standing was the Associate Degree of Hospitality Management (65%), the latter course also provided the highest number of average exemptions awarded.

The results of the analysis of academic performance of students who enrolled in PWA associate degree courses with advanced standing and those who didn't, generally showed that for half the courses students entering with advanced standing performed better, i.e., failed fewer units and scored a higher GPA, than those who didn't.

Course		Number of students in sample	Average number of exemptions given	Average number of units failed	Average GPA gained	% Graduating 2007-2012	% Students gaining advanced standing
Associate Degree of Aviation (Aeronautics)	Advanced standing	11	6.46	1.42	1.31	27%	25%
	No Advanced standing	33	0	1.24	2.21	36%	
Associate Degree of	Advanced standing	13	6.69	1.15	2.02	38%	37%

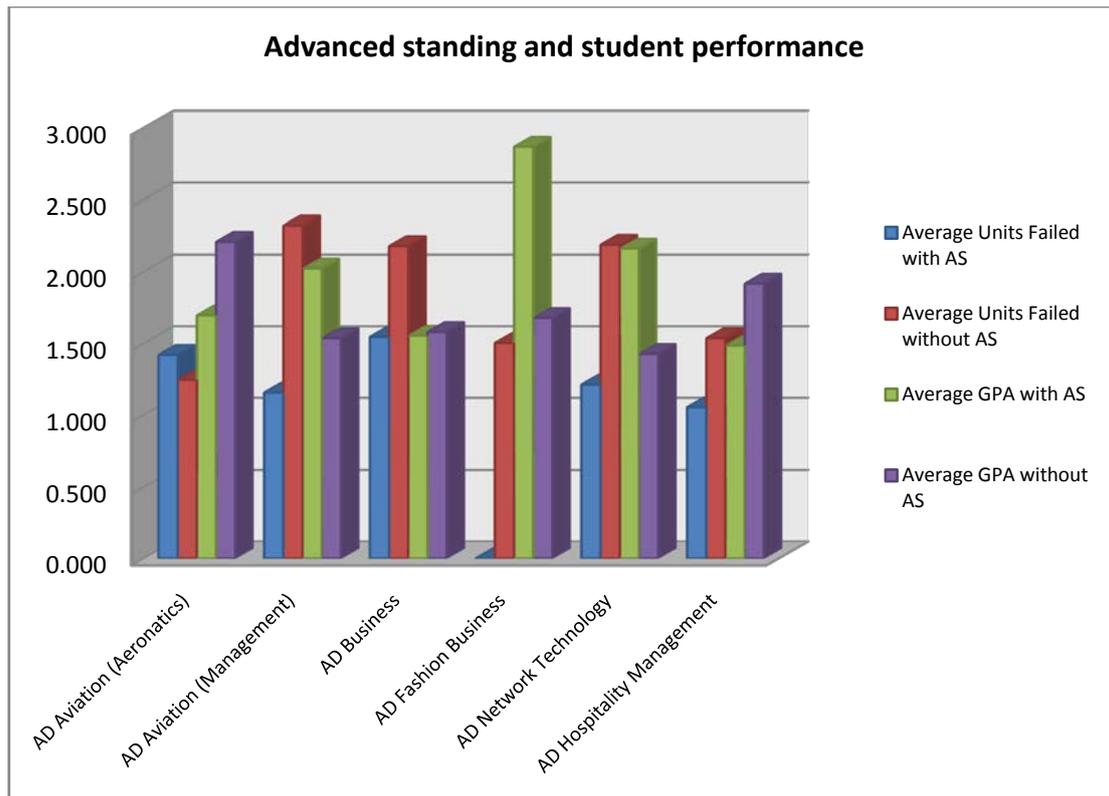
Course		Number of students in sample	Average number of exemptions given	Average number of units failed	Average GPA gained	% Graduating 2007-2012	% Students gaining advanced standing
Aviation (Management)	No Advanced standing	22	0	2.32	1.53	18%	
Associate Degree of Business	Advanced standing	84	4.93	1.54	1.55	45%	50%
	No Advanced standing	85	0	2.18	1.58	20%	
Associate Degree of Hospitality Management	Advanced standing	99	11.19	0.98	1.51	71%	62%
	No Advanced standing	60	0	1.53	1.92	28%	
Associate Degree of Network Technology	Advanced standing	43	3.86	1.201	2.16	25%	50%
	No Advanced standing	43	0	2.186	1.423	0%	
Associate Degree of Fashion Business	Advanced standing	10	7.900	0	2.867	20%	50%
	No Advanced standing	10	0	1.5	1.675	0%	

Three courses did not show such a clear trend. Students in the Associate Degree of Aviation (Aeronautics) who entered with advanced standing failed more units on average and scored a lower average GPA. Students in the Associate Degree of Hospitality Management who received exemptions on enrolment on the other hand, failed fewer units on average than the group who did not receive any credit for previous study, but did have a lower average GPA than that obtained by the students who received no credit for previous study.

For the Associate Degree of Business, no significant difference was seen between the average GPA obtained from the advanced standing group over the non-advanced standing group. The students gaining credit from previous study did, however, fail fewer units on average.

In all but the Associate Degree of Aviation (Aeronautics) a greater percentage of students who enrolled with advanced standing graduated from their course. Both the Associate Degree of Network Technology (first offered in 2011) and the Associate Degree of Fashion Business (first offered in 2012) have students who enrolled with advanced standing and were able to graduate within the short period the course has been offered. This supports the argument that giving exemptions for earlier learning enables students to complete their studies within a shorter time period. Also worth noting for the Associate Degree of Fashion Business is the fact that in its first year, no students who enrolled with advanced standing failed units.

Graphically these results are shown below:



Tests for significance based on the null hypothesis that there is no difference between groups in their academic performance – measured by average GPA score – was undertaken using a t-test. This showed that for all courses except the Associate Degree of Business there is a significant difference in the academic performance between students who enter with advanced standing and those who don't.

Course		Average GPA	Significant difference in means	Probability of same means (p value)
Associate Degree of Aviation (Aeronautics)	Advanced Standing	1.31	Yes	0.020
	No Advanced Standing	2.21		
Associate Degree of Aviation (Management)	Advanced Standing	2.02	Yes	0.138
	No Advanced Standing	1.53		
Associate Degree of Business	Advanced standing	1.52	No	0.659
	No Advanced Standing	1.58		
Associate Degree of Hospitality Management	Advanced Standing	1.51	Yes	0.018
	No Advanced Standing	1.91		
Associate Degree of Fashion Business	Advanced Standing	2.87	Yes	0.029
	No Advanced Standing	1.68		
Associate Degree of Network Technology	Advanced Standing	2.160	Yes	0.008
	No Advanced Standing	1.423		

The anomalous result is that achieved for the Associate Degree of Aviation (Aeronautics) where students who received exemptions from previous study – on average 6.5 units equivalent to 1.5 semesters of study – scored a significantly lower average GPA and failed on average slightly more units. The difference in average GPA achieved was significant even taking into account the small sample size of the group.

When looking at the results of the 24 Polytechnic West students who gained academic credits for their Associate Degree study when they enrolled to study at university in 2012, significant differences are seen in the academic performance based on the course they received advanced standing for.

PWA Course	University Course	Sample size	GPA
Associate Degree of Aviation (Management)	Bachelor of Commerce	2	2.50
Associate Degree of Aviation (Aeronautics)	Bachelor of Commerce	1	2.00
Associate Degree of Business	Bachelor of Commerce	9	1.91
Associate Degree of Hospitality Management	Bachelor of Commerce	6	1.11
Associate Degree of Network Technology	Bachelor of Science	6	N/A
Associate Degree of Fashion Business	N/A	0	N/A
Total		24	

Those students who completed either the Associate Degree of Aviation (Aeronautics), the Associate Degree of Aviation (Management) or the Associate Degree of Business scored a significantly higher average GPA than students entering the Bachelor of Commerce with advanced standing from the Associate Degree of Hospitality Management. Given that graduates of this course are nearly three times more likely to have received advanced standing in the associate degree – and a lot of exemptions at that – suggests that while giving recognition of credit for VET study enables students to complete their course more quickly, it does not sufficiently prepare them for their study at a university level. This argument also could hold true for the Associate Degree of Aviation (Aeronautics).

The performance of these three courses is explored further in the next section.

The Associate Degree of Hospitality Management

Students in the Associate Degree of Hospitality Management who enrolled with advanced standing generally enter having completed the competency-based Advanced Diploma of Hospitality. This VET qualification is based on students achieving units of competency rather than completing an academically coherent qualification.

The students receiving exemptions for the associate degree who subsequently graduated, had a GPA that ranged from 0.57 to 3.71 and the average GPA achieved by this group was 1.71. In comparison, the cohort graduating who did not receive credit for previous study had GPAs that ranged from 1.36 to 3.94 and had an average of 3.23.

In general, students gaining a GPA of less than 1.35 were unlikely to graduate unless they had enrolled with advanced standing. Students who had received exemptions for previous study and obtaining a GPA of less than 1.0 generally failed at least one unit.

Graduates from the Associate Degree of Hospitality Management enrolling at PWA's articulating partner university typically receive the equivalent of 2 years of credit exemptions meaning they enrol in third year units. Based on the limited data available of their academic achievement it would appear that these students do not perform well achieving an average GPA of 1.11.

These results suggest that receiving a large amount of study exemption for previous VET study does not necessarily prepare students to succeed in the type of academic study expected of a higher education student. It also suggests that when considering entry into further university study with exemption given for previous study it may benefit the student to take into account the GPA achieved in graduating from their course. Those students with a GPA of less than 1 may struggle to succeed in the highly academic courses offered unless they are given additional academic support and this is not generally available to third year students who are expected to have developed these skills and literacies in the first and second year of study.

The Associate Degree of Business

The Associate Degree of Business offered by Polytechnic West is characterised by having a large number of international students. Many international students entering this course with advanced standing have completed either the Diploma of Business which gives them the equivalent of 6 months advanced standing or the Diploma of Management (CT81). The CT81 is an accredited VET qualification compiled of units of competency that was developed to prepare international students for university study and students coming into the Associate Degree through this pathway typically receive the equivalent of one year's credit exemptions, entering directly into second year associate degree units.

Students enrolled in the associate degree with advanced standing who subsequently graduated had a GPA that ranged from 0.57 to 2.88 and the average GPA achieved by this group was 1.66. In comparison, students graduating who did not receive advanced standing had GPA scores that ranged from 1.22 to 3.81 with an average GPA of 2.16.

In general students with a GPA of less than 1.20 are unlikely to complete the course successfully and are likely to have failed at least one unit. Students with a GPA of less than 1.22 who have graduated have all been enrolled with advanced standing. Notably those students graduating with a GPA above 3.0 have not received any exemptions for prior study.

Graduates of this course who have progressed to study at university received the equivalent of 2 year's credit for their associate degree study. The 2012 data from PWA's articulating partner university shows that these students (average GPA of 1.907) perform better than those who articulated from the Associate Degree of Hospitality Management.

These results suggest that students who have at least a year of experience of studying higher education before articulating to university perform better than those who only complete 6 months in a higher education course. As seen with the data from the Associate Degree of Hospitality Management, graduating students from the Associate Degree of Business who have not come through an advanced standing pathway perform significantly better and generally gain a higher GPA

The Associate Degree of Aviation (Aeronautics)

The Associate Degree of Aviation (Aeronautics) is a highly specialised course providing the theory components required of students who seek to become licenced pilots. There is an articulation pathway available from the Diploma of Aeronautics but this is only used by

approximately one third of students. Students coming through this pathway typically receive 9 units as credit exemptions although some students have received credit exemptions for only 4 units.

Of the 11 students enrolled in the Associate Degree of Aviation (Aeronautics) with advanced standing only 3 have graduated. Their GPA ranged from 1.71 to 2.83 and two of the three students failed one unit. The average GPA obtained was 2.37.

Twelve students who enrolled in the Associate Degree of Aviation (Aeronautics) without advanced standing have graduated achieving a GPA that ranged from 1.687 to 3.5. The average GPA obtained by this group was 2.848. Generally students with a GPA of less than 1.6 are unlikely to complete the course successfully.

In the 2012 data from PWA's articulating partner university, only one graduate went on to study with advanced standing based on their associate degree. This student achieved a high standard in their university study obtaining a GPA of 2.0 (i.e. an average of a credit in all their enrolled units).

Discussion

Results from this analysis show that students who enrol in PWA's associate degree courses are more likely to complete their course within a shorter timeframe than students who do not enrol with advanced standing. The results also show that students who receive advanced standing on enrolment are significantly more likely to graduate from their course than those who don't receive credit for previous study.

While this research has not explored the reasons behind this finding, other research into the use of student pathways (see for example Guthrie et al., 2011) suggest it may be due to a range of factors including reduction of financial burden and increased motivation to study arising from improved self esteem as a result of acknowledgement of a student's prior learning.

Having said that, the results also suggest that significantly reducing the time a student engages with higher education study may negatively impact on their academic achievement. Supporting this conclusion the data show that students who have graduated from a PWA course for which they received a large amount of credit exemption appear to be less well prepared to succeed at university than students who completed a greater proportion of their higher education course through study. In the cases reviewed in this research, the course in which students received the highest amount of credit exemption had the poorest academic record as an articulating pathway for graduate students.

A range of reasons could be proposed for this. The first is that the pedagogy of VET training is focussed strongly on the development of practical skills rather than the academic literacies of the development of critical thinking, independent study and scholarly analysis that are required for higher education (Hammer & Green, 2011; Gunn et al., 2011). For students to succeed in higher education, they need to develop the necessary academic literacies to enable them to complete their qualifications successfully. Other research (see for example Sheridan, 2011) suggests that the opportunity to develop academic literacy is particularly important for international students who often come to study in a foreign country unprepared to meet the expectations of higher education lecturers.

Conclusion

Research undertaken by Karmel and Lu into the pathways students take to higher education (Karmel & Lu, 2012) shows that for students wishing to progress to study at university, the associate degree provides a sound option due to the amount of credit given to graduates of such programs. The current analysis suggests that while the pathway is a legitimate entry to university, it does not provide a short-cut to successful university study.

While providing recognition of prior learning through the award of credit exemptions helps to maintain student's motivation to study to completion of their course, it does not necessarily support their academic achievement. The data tends to indicate that where students receive a large amount of exemption from previous VET study, particularly if it leads to less than one year's engagement in a higher education course, students are inadequately prepared for study at a higher education level. This could be due in part to the fact that VET qualifications are based on competency achievement rather than an academically coherent course of study that builds theory, academic literacy, problem solving, research capability and independent study within its pedagogy. VET study, in and of itself, does not provide students with the requisite academic preparation for independent study based on a body of knowledge and research-informed theory.

To counter this effect without creating undue barriers for students, providers should give additional academic skills support to students entering with considerable credit. Whilst this may be achieved by providing additional study skills classes to students, the voluntary nature of such classes tend not to be popular with students who have employment responsibilities. A faculty agreed mapping process that clearly delineates the presentation of academic skills in a developmental and continuous way across a course can lead to in-class support initiatives for all students to build their learning with peer and lecturer support.

Where significant credit is being awarded for previous study and then used to assist students to progress to further study at university, it would also be beneficial to include the articulating partner university and their courses in such mapping exercises to ensure that students using credit pathways are not unduly penalised.

References

Brogan, J. (2012). *RPL and Credit Rating in Scotland: Benefits and Critical Success Factors*. Edinburgh Napier University.

Gunn, C., Hearne, S and Sibthorpe, J. (2011) Right from the Start: A Rationale for Embedding Academic Literacy. *Journal of University Teaching and Learning Practice*, v8 n1 article 6.

Guthrie, H., Stanwick, J. and Karmel, T. (2011). *Pathways: Developing the skills of Australia's workforce*. NCVER; accessed from <http://www.ncver.edu.au/publications/2376.html>

Hammer, S. J. and Green, W. (2011). Critical Thinking in a First Year Management Unit: The Relationship between Disciplinary Learning, Academic Literacy and Learning Progression. *Higher Education Research and Development*, v30 n3, pp303-315.

Karmel, T. and Lu, T. (2012). *Associate degree or advanced diploma? A case study*. NCVER; accessed from <http://www.ncver.edu.au/publications/2523.html>

Milne, L, Kostanski, M, Coarla, C. and Andison, K. (2008). *Student Decision Making at Victoria University*. Victoria University access from http://tls.vu.edu.au/portal/site/research/resources/student_decision-making_at_VU_final_report.pdf

Sheridan, V. (2011). A Holistic Approach to International Students, Institutional Habitus and Academic Literacies in an Irish Third Level Institution. *The International Journal of Higher Education and Educational Planning*, v62 n2, pp129-140.