

Understanding Tasmanian School Students' Post-School Pathway Intentions

Phase Three: Analysis of TASC and University of Tasmania data

Report for the Future Students Division, University of Tasmania

Aishah Bakhtiar, Natalie Brown, Kitty te Riele, Tess Crellin and Melody West

Peter Underwood Centre for Educational Attainment, University of Tasmania

July 2020



Acknowledgements

We are grateful to staff from the Office of Tasmanian Assessment, Standards and Certification (TASC) and from the University of Tasmania Student Operations team for their support.

Cover photo credits:

- Two top photos and bottom left photo – Osborne Images
- Bottom right photo – Inessa Corney

Research team

Dr Aishah Bakhtiar
Professor Natalie Brown
Professor Kitty te Riele
Ms Tess Crellin
Ms Melody West
Dr Becky Shelley
Ms Kate Bramich

Creative Commons licence

This publication is licensed under a Creative Commons Attribution 3.0 Australia Licence.



Creative Commons Attribution 3.0 Australia Licence is a standard form license agreement that allows you to copy, distribute, and transmit this publication provided that you attribute the work. The reference for attribution is below.

A summary of the licence terms is available from

<http://creativecommons.org/licenses/by/3.0/au/deed.en>. The full licence terms are available from <http://creativecommons.org/licenses/by/3.0/au/legalcode>.

Suggested citation

The recommended citation for this report is:

Bakhtiar, A., Brown, N., te Riele, K., Crellin, T. & West, M. (2020). *Understanding Tasmanian school students' post-school pathway intentions. Phase Three: Analysis of TASC and University of Tasmania data*. Hobart: University of Tasmania, Peter Underwood Centre for Educational Attainment.

ISBN 978-1-922352-44-6 (print)

ISBN 978-1-922352-45-3 (electronic)

The Peter Underwood Centre

The Peter Underwood Centre for Educational Attainment is a partnership between the University of Tasmania and the Tasmanian State Government in association with the Office of the Governor of Tasmania.

Webpage: utas.edu.au/underwood-centre

Email: UnderwoodCentre.Enquiries@utas.edu.au

Table of Contents

Executive Summary.....	iv
Section 1: Introduction	1
1.1 Research focus.....	1
1.2 Data sources	2
Section 2: Overview of state (TASC) data	4
2.1 TCE and ATAR rates of attainment by geographical region.....	5
2.2 TCE and ATAR rates of attainment by school sectors.....	6
2.3 TCE and ATAR rates of attainment by school socio-educational advantage.....	7
Section 3: TASC “Outstanding Achievement Awards” 2018 and 2019	10
3.1 Post-school pathway plans	12
3.2 Gap years, travel, and ambiguity.....	13
3.3 Industry or field preferences for post-school work or study.....	13
Section 4: Tasmanian secondary school students’ application to the University of Tasmania.....	16
4.1 Applicants by region	16
4.2 Applicants by school sectors.....	17
4.3 Applicants by school ICSEA quartile	17
4.4 Application by broad areas of interests.....	18
4.5 Applicants’ top preferences.....	24
Section 5: Tasmanian students enrolled at the University of Tasmania	26
5.1 Application to enrolment conversion rate	26
5.2 Overview of enrolled applicants.....	27
5.3 Enrolment by region	28
5.4 Enrolment by school sectors	30
4.5 Enrolment by school ICSEA quartile	31
Section 6: Next steps.....	33
References	35
Appendix	36

List of Figures

Figure 1. Year 12 Tasmanian Schools.....	2
Figure 2. Year 12 students' TCE and ATAR attainment by geographical region.	5
Figure 3. TCE and ATAR attainment by school sectors.	7
Figure 4. The ICSEA score range for each quartile.....	8
Figure 5. TCE and ATAR attainment by school ICSEA quartile.	9
Figure 6. Gender of 2018 and 2019 VET and Academic Award recipients (%).....	11
Figure 7. School sector of 2018 and 2019 VET and Academic Award recipients (%)	11
Figure 8. Post-school pathway plans – VET Award recipients (%)	12
Figure 9. Location of post-school plans (%)	12
Figure 10. Preferred industry or field (%)	14
Figure 11. Highly preferred industries and fields.....	15
Figure 12. Gender composition of the applicants and location(s) of study students applied for.	16
Figure 13. Undergraduate University of Tasmania applicants by region.	16
Figure 14. Undergraduate University of Tasmania applicants by school sectors.....	17
Figure 15. Undergraduate University of Tasmania applicants by school ICSEA band.	17
Figure 16. Heat maps showing hot study areas (sub and broad categories; 2018 and 2018).....	19
Figure 17. Heat maps showing hot sub-areas between geographical regions.....	20
Figure 18. Heat maps showing hot broad areas between geographical regions.	20
Figure 19. Heat maps showing hot sub-areas between school sectors.....	21
Figure 20. Heat maps showing hot broad areas between school sectors.	22
Figure 21. Heat maps showing hot sub-areas between school ICSEA quartiles.....	23
Figure 22. Heat maps showing hot broad areas between school ICSEA quartiles.	24
Figure 23. Heat maps showing applicants' top two preferred sub-study areas.	25
Figure 24. Heat maps showing applicants' top two preferred broad study areas.	25
Figure 25. Enrolled Tasmanian secondary school applicants.	28
Figure 26. Enrolled students grouped by the Tasmanian region they come from.....	28
Figure 27. Proportion of enrolled students in each ATAR score bracket by region.	29
Figure 28. Enrolled students grouped by their Year 12 school sector.....	30
Figure 29. Proportion of enrolled students in each ATAR score bracket by school sector.	30
Figure 30. Enrolled students grouped by their Year 12 school ICSEA quartile.	31
Figure 31. Proportion of enrolled students in each ATAR score bracket by school ICSEA quartile.....	32

List of Tables

Table 1. TCE Attainment Based on Potential Year 12 Population.....	4
Table 2. TCE Attainment for Those Continued Directly from Year 10	4
Table 3. Average (and Standard Deviation) of Schools' Mean ATAR Score by Region	6
Table 4. Average (and Standard Deviation) of Schools' Mean ATAR Score by School Sectors.....	7
Table 5. Average (and Standard Deviation) of Schools' Mean ATAR Score by School ICSEA Quartile ...	9
Table 6. Broad and Sub Areas of Study	18
Table 7. Mean Application to Enrolment Conversion Rate by Region.....	26
Table 8. Mean Application to Enrolment Conversion Rate by School Sector.....	27
Table 9. Mean Application to Enrolment Conversion Rate by ICSEA Quartile	27
Table 10. Enrolled Students' Mean ATAR Score by Region.....	29
Table 11. Enrolled Students' Mean ATAR Score by School Sector	31
Table 12. Enrolled Students' Mean ATAR Score by School ICSEA Quartile.....	32

Glossary

AMC	Australian Maritime College, UTAS
ATAR	Australian Tertiary Admission Rank
CALE	College of Arts, Law and Education, UTAS
COSE	College of Sciences and Engineering, UTAS
HAP	High Achiever Program
ICSEA	Index of Community Socio-Educational Advantage
SD	Standard deviation from the mean
TASC	Office of Tasmanian Assessment, Standards and Certification
TCE	Tasmanian Certificate of Education (Year 12 credential)
UCP	University Connections Program
UTAS	University of Tasmania

Executive Summary

The University's Future Students Division has commissioned the Peter Underwood Centre to undertake a study which seeks insights into the post-school intentions of Tasmanian Year 10, 11 and 12 students from all school sectors.

This interim report focuses on Phase Three of the research, presenting findings from analysis of data from the Office of Tasmanian Assessment, Standards and Certification (TASC) and from the University of Tasmania.

Findings from TASC data

- Based on the provision of ATAR scores in Tasmania, approximately 2,100 students are eligible to apply to enrol at a university directly after completing Year 12.
- The average ATAR score between the South, North and North-West regions of Tasmania are not significantly different.
- The average ATAR score is higher for Independent schools compared to Government and Catholic schools. There is no significant difference between average ATAR scores for the latter two groups.
- Schools whose ICSEA (Index of Community Socio-Educational Advantage) score is in the highest quartile have a significantly higher average ATAR score compared to schools in the lower ICSEA quartiles.
- Across 2018 and 2019, TASC awarded outstanding achievement in VET Awards to 56 TCE graduates: 44 from Government schools, 10 from Catholic schools, and 5 from Independent schools. In addition, TASC awarded outstanding achievement Academic Awards to 59 TCE graduates: 26 from Government schools, 6 from Catholic schools, and 27 from Independent schools.
- Almost all Academic Award recipients planned on going to university either in the year after completing high school or following a gap year.
- VET Award recipients post-school pathways had more diverse plans, and these often included employment—on its own or in combination with study.
- The most popular industries or fields for post-school pathways for VET Award recipients were Tourism and Hospitality, and Agriculture, Forestry and Fishing.
- The most popular industries or fields for post-school pathways for Academic Award recipients were Science and Maths, Health and Social Assistance, and Engineering

Findings from University of Tasmania data

- For applications by Tasmanian secondary school students to enrol at the University of Tasmania, the proportion of applicants from the Northern region is slightly lower than expected (by about 4-6%) in both application years (2017 and 2018).
- The proportion of applicants from Extension Schools is significantly lower than expected given the TASC data on ATAR achievements.
- On a positive note, the proportion of applicants from the lowest (least advantaged) ICSEA bracket is higher than expected. However, this group of students makes up only about 2-3% of the total number of applicants.
- Tasmanian applicants are generally interested in the Generic Pathway¹, Health, General Arts, and Science programs (see the Appendix for details of courses in each of these pathways). There are some differences between regions, with Business courses also being popular for the Northern applicants in 2017 and Education courses being consistently popular for the North-Western applicants. Science courses are particularly popular among the Southern applicants in both application years.
- Health Sciences is an uncommon choice amongst applicants from government Extension Schools, particularly in 2017. For the other school sectors, Health Sciences remained a popular choice in both years. Independent schools consistently recorded a lower level of applications to Education courses than other sectors.
- Education is more popular for applicants from schools below 50th percentile on ICSEA. In contrast, Natural Sciences is more popular for applicants from schools above 50th percentile on ICSEA. Across all ICSEA levels, Health Sciences and Generic Pathway programs are most common.
- Enrolment data indicate that the proportions of enrolled students are not different from the expected proportions between geographical regions, school sectors, or the schools' ICSEA score.
- Tasmanian students are mostly enrolled in the College of Arts, Law and Education and the University College. The data did not allow for comparison against interstate students.
- Overall, there is a high conversion rate (75-80%) from applicants to being enrolled at the University of Tasmania as of the semester 2 census date. This indicates Tasmanian secondary school students are highly likely to enrol at the University of Tasmania when they receive an offer to study at the university.

¹ The term Generic Pathway in this report is inclusive of all pathway programs.

Section 1: Introduction

1.1 Research focus

To support University of Tasmania's aim to enable more Tasmanian students to access university pathways, it is important to understand the intentions of students in the last few years of secondary school for their post-school pathways, including any factors that influence the choices they make about attending university, selecting a particular university, and selecting a particular course. The University wishes to understand what different students' expectations, goals and prospects are for the future.

The University's Future Students Division has commissioned the Peter Underwood Centre to undertake a study which seeks insights into the post-school intentions of Tasmanian Year 10, 11 and 12 students from all school sectors. The overarching research question is:

Why do Tasmanian school students intend to pursue particular post-school pathways?

The specific objectives are to:

- Identify the main reasons Tasmanian school students intend to pursue specific post-school options (including but not limited to attending the University of Tasmania or another university, pursuing vocational education, entering the labour market);
- Identify the types of courses and industries/sectors Tasmanian school students are interested in targeting as a post-school pathway;
- Understand the profile of students with different post-school intentions and interests; and
- Understand how post-school intentions and interests may be influenced by the University's: product offerings (in terms of campus locations, courses, and delivery modes), brand positioning, and communication channels and strategies.

The study consists of four phases:

1. **Expert Informant Focus Groups:** Gaining insights from key experts, i.e. current Tasmanian school students; parents; and school staff. – reported in December 2019
2. **Student Survey:** The survey design is informed by the expert focus group outcomes, and the survey will be provided to a broader population of school students.
3. **Quantitative Data Collection:** For triangulation with qualitative data and addition of pattern analysis of elements such as courses completed during Years 10-12, credentials attained, ATARs, and post-school enrolments.
4. **Follow-up sub-cohort Interviews:** Involving a smaller number of students, to provide deeper understanding of students' intentions.

This interim report focuses on Phase Three of the research, presenting findings from analysis of data from the Office of Tasmanian Assessment, Standards and Certification (TASC) and from the University of Tasmania.

1.2 Data sources

Data sources include:

- Office of Tasmanian Assessment, Standards and Certification (TASC) public data on assessment and certification for the Year 12 credential: the Tasmanian Certificate of Education (TCE);
- TASC booklets for the 2018 and 2019 TCE outstanding achievement awards; and
- University of Tasmania undergraduate application and enrolment data from 2017 and 2018 supplied by the university's Student Operations team.

The University data went through several filtering steps. From a list of domestic applicants in 2017 and 2018, Tasmanian students were retained if their Year 12 school was identified to be in Tasmania and offering Year 12 education. It should be noted that from 2017, applicants were required to indicate their Year 12 school in the University's application. However, a handful of applications did not include the school name and therefore were removed from the data sample.

Tasmanian schools included in the data are identified on the map below (Figure 1). Along with applicants from the schools below (N = 35), applicants who completed Home Education were also included in the sample.

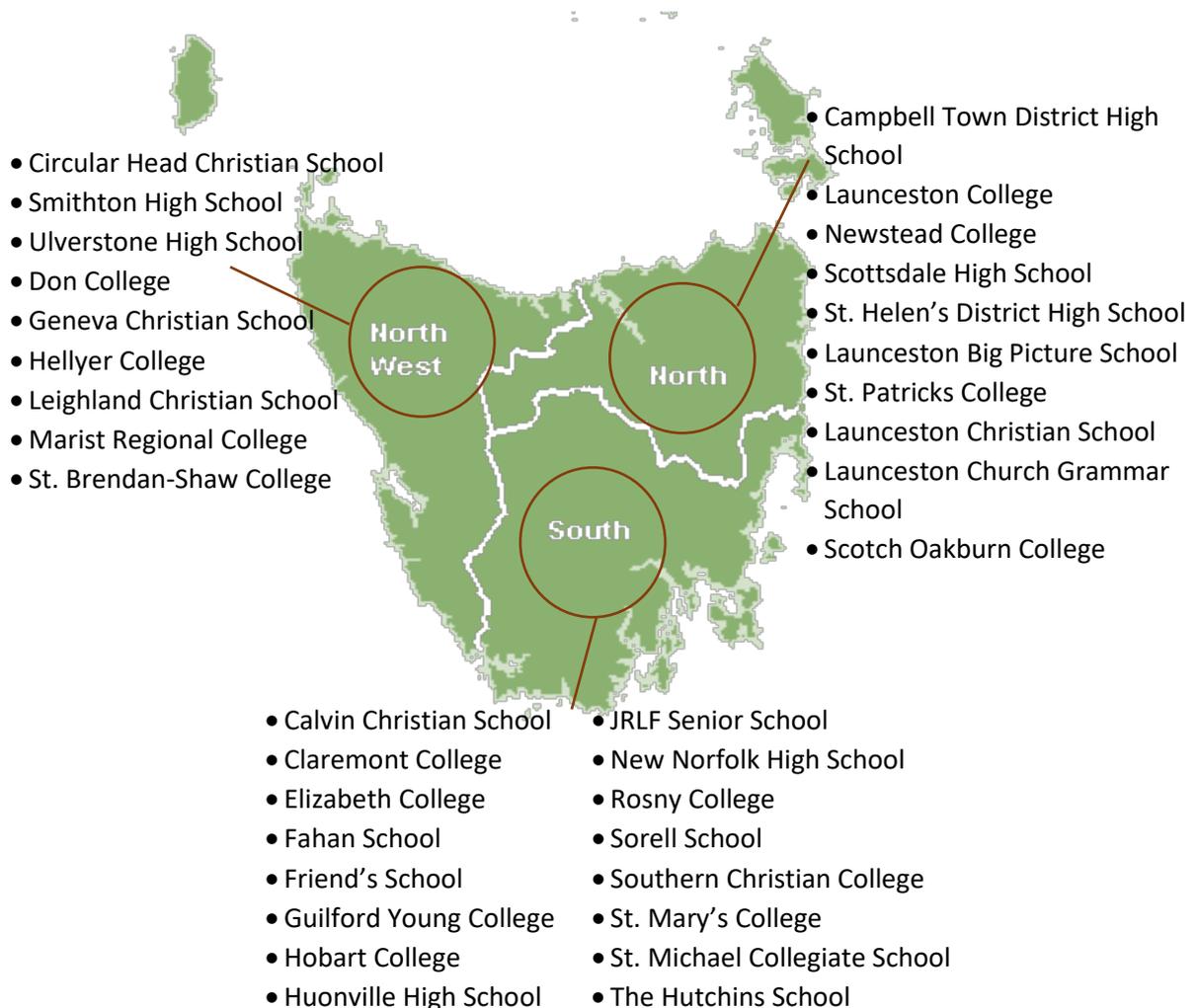


Figure 1. Year 12 Tasmanian Schools.

Several Tasmanian schools which offer Year 12 are not listed in Figure 1 because there were no applicants from these schools in either 2017 or 2018. These schools include Deloraine High School, Devonport High School, Distance Education Tasmania, Mountain Heights School, Sheffield District High, St. Mary's District High, Star of the Sea College, Tasman District School, Triabunna District High, and Winnaleah District High.

Both "St. Mary's" and "St. Patrick's" are school names that are used across Australia. Applicants from schools with these names whose permanent residential postal code was outside Tasmania were removed, due to the likelihood that they had attended a school interstate.

Next, given the research focus on recent secondary school students, "mature" applicants were also removed from the data sample. For 2017 data, applicants born before 1 January 1997 were removed. For 2018 data, applicants born before 1 January 1998 were removed. These dates were chosen with the assumption that the vast majority of applicants are at least 17 years old when they apply to enter university directly from secondary school. Some students may take a one- or two-year gap before applying to university—these applicants were included in the data sample.

The final filtering process involved removing applications to the companion degree of Bachelor of Philosophy, and for the preparation program UniStart.

In consideration of the methods used to filter the University's data, caution should be exercised when interpreting the quantitative findings presented in this report.

Data analysis in this report mostly involved:

- descriptive statistical analysis of Year 12 students' TCE and ATAR attainment (section 2);
- thematic analysis of comments about TASC award recipients and their plans (section 3); and
- descriptive statistical analysis of University of Tasmania applications (section 4) and enrolments (section 5).

For the statistical analyses, where possible chi-square comparisons were conducted to compare the university's observed proportions of applicants with the expected proportions based on the state's data. One-way ANOVAs were performed for any mean comparisons between groups. Visualisation tools, such as a heat map, are used to demonstrate any obvious patterns regarding application or enrolment.

Section 2: Overview of state (TASC) data

Direct entry to a university from a secondary school often requires students to have an ATAR (Australian Tertiary Admission Rank)². The ATAR is a rank score, between 0 and 99.95, that is calculated based on the overall academic achievements of eligible students within a year group who finished their senior secondary schooling (TASC, 2019). In simple terms, ATAR indicates a student's overall academic achievement in comparison to their peers.

Each year, TASC calculates the ATAR based on students' tertiary entrance scores using results from eligible courses. To receive an ATAR, students must complete two years of post-Year 10 study, after which they received a Tasmanian Certificate of Education (TCE) and achieved a satisfactory result in at least four scaled courses³ (TASC, n.d.).

According to the TASC data (Table 1), in a year, about 58% Tasmanian students achieved the TCE regardless of their age of starting Year 12.

Table 1. TCE Attainment Based on Potential Year 12 Population

	2017	2018
Potential Year 12 population*	6575	6416
Achieved the TCE in the year	3871	3756
Percentage achieved TCE from potential Year 12 population	58.9%	58.5%

*Note: Weighted based on ABS estimates for the number of 15- to 19-year-olds in Tasmania in that year

The number of Year 12 students who directly continued from Year 10 education is, however, lower than the number estimated above (TASC, n.d.; see Table 2). About 70% of Year 10 students continued directly to complete their Year 12 education⁴. Of those who continued, roughly 55% achieved the TCE and 33% received an ATAR score. This means that, each year, approximately 2100 students are eligible to apply to enrol at a university directly after completing Year 12.

Table 2. TCE Attainment for Those Continued Directly from Year 10

	2017	2018
Year 10 students enrolled two years earlier	6372	6562
Year 12 students who continued directly from Year 10	4977 (73.9%)	4894 (74.6%)
Achieved the TCE	3755 (55.8%)	3631 (55.3%)
Achieved an ATAR	2126 (31.6%)	2131 (32.5%)
Attained VET Certificate	1672 (24.8%)	1600 (24.4%)

*Note: Numbers in brackets referring to the corresponding percentage based on total Year 10 students in that year.

Follow-up analyses of the TCE and ATAR rates of attainment (Section 2.1-2.3) were performed based on the pool of Year 12 schools identified in Section 1.4. Consequently, the statistics produced below would not be directly equivalent if all Year 12 schools in the state were to be included.

² Some Year 12 students are admitted without an ATAR. Entry in these circumstances may be through a 'concessional ATAR' or by audition or portfolio (as appropriate for some courses). Students with no or low ATAR may be admitted to a pathway course.

³ Scaled courses include TASC accredited Level 3 and 4 courses, and selected courses from University of Tasmania's High Achiever Program (HAP) and University Connections Program (UCP)

⁴ From 2020 the Education Act requires students to participate in education and training until they complete Year 12, attain a Certificate III, or turn 18 years of age (whichever occurs first).

Each school's data were obtained from their yearly TCE attainment profile published on the TASC website⁵. The types of data obtained from the schools' profiles include:

- Number of Year 12 students aged 15 to 19 enrolled in the school in a given year
- Number of students who achieved TCE in that year
- Number of students who achieved ATAR in that year
- Mean ATAR score for that school in that year

Three sets of analysis were then performed to examine whether differences in attainment rates exist between (a) geographical regions, (b) school sectors, and (c) levels of socio-educational advantage.

2.1 TCE and ATAR rates of attainment by geographical region

In terms of geographical region, findings demonstrate that about 50% of Year 12 students aged 15 to 19 are in the Southern region, followed by approximately 30% in the North, and 20% in the North-West (Figure 2, Panel A).

Across all schools, about 80% of the Year 12 students successfully achieved the TCE. The proportions of TCE attainment between regions remain comparable to the proportions of Year 12 students enrolled in those regions (Figure 2, Panel B). Approximately half of them in the South (52.6% in 2017 and 50.8% in 2018), a third in the North (27.8% in 2017 and 28.7% in 2018), and a fifth in the North-West (19.6% in 2017 and 20.4% in 2018).

Findings also indicate that about 2100 students achieved an ATAR each year (Figure 2, Panel C). A little over 50% is concentrated in the Southern region (54.6% in 2017 and 52.0% in 2018), followed by the Northern region (27.2% in 2017 and 30.5% in 2018) and the North-Western region (18.2% in 2017 and 17.5% in 2018).



Figure 2. Year 12 students' TCE and ATAR attainment by geographical region.

When the schools' mean ATAR score were examined (Table 3), one-way ANOVA analyses indicate that there are no significant differences in terms of ATAR scores between regions in both years, $F_{(2,21)} = .32, p = .73$ for 2017 and $F_{(2,21)} = 1.01, p = .38$ for 2018. Note also that not all schools have a mean ATAR score for each year due to either (a) not having any students in the school with an ATAR, (b) having one student achieved an ATAR, or (c) a score for that school was not provided by TASC. Four of such schools are in the North, another four in the North-West, and five in the South.

⁵ School attainment profiles: <https://www.tasc.tas.gov.au/about/data/attainment-profiles-direct-continuation-data/>

Table 3. Average (and Standard Deviation) of Schools' Mean ATAR Score by Region

	2017	2018
North	79.17 (4.96)	78.12 (4.36)
North-West	77.84 (3.10)	77.36 (2.57)
South	80.17 (6.32)	80.50 (4.61)
Overall	79.37 (5.25)	79.35 (4.19)

2.2 TCE and ATAR rates of attainment by school sectors

Secondary schools in Tasmania are typically categorised into the following sectors: Government, Catholic, and Independent. However, government secondary schools in Tasmania have two distinguishable types: Colleges and Extension Schools. Extension Schools are the government's recent strategy to promote school continuation beyond Year 10⁶. With the establishment of Extension Schools, students (particularly from the remote areas) have the option to continue their Year 11 and Year 12 education at their local secondary school as opposed to moving to a government College or non-government school. Given their localised offering and recent introduction, the enrolment size in each Extension School is typically small, with a median of about 14 students per school.

In this report, school sectors are divided into four categories:

- Government Year 11-12 Colleges (n = 8),
- Government Extension Schools (n = 10),
- Catholic schools (n = 5) and
- Independent schools (n = 12).

Based on TASC data (Figure 4), it is not surprising to see that most Year 12 students are enrolled in government Colleges (67.3% in 2017 and 65.0% in 2018). In the private sector, Catholic schools have a slightly higher Year 12 enrolment (17.7% in 2017 and 16.9% in 2018) compared to Independent schools (11.5% in 2017 and 13.8% in 2018). Government Extension Schools have the least number of Year 12 enrolment (3.4% in 2017 and 4.2% in 2018).

Referring to students' TCE achievements, the proportions between school sectors remained relatively similar as with their Year 12 enrolment. Most TCE recipients are from government Colleges (65.3% in 2017 and 61.9% in 2018), followed by Catholic schools (19.1% in 2017 and 19.0% in 2018), Independent schools (13.3% in 2017 and 16.3% in 2018), and government Extension Schools (2.3% in 2017 and 2.8% in 2018).

The proportions are somewhat different in terms ATAR achievement. Of those with an ATAR, government College students now only make up of about half of the students (54.3% in 2017 and 51.7% in 2018). Catholic and Independent schools each make up of about a fifth of the students (24.6% in 2017 and 22.1% in 2018 for Catholic, and 20.2% in 2017 and 24.6% in 2018 for Independent). Finally, Extension School students with an ATAR make up of only about 1% of the total number of recipients (0.9% in 2017 and 1.6% in 2018).

⁶ Extension Schools: <https://www.education.tas.gov.au/parents-carers/school-colleges/years-11-12-extension-schools/>



Figure 3. TCE and ATAR attainment by school sectors.

Mean comparison between school sectors in terms of their average ATAR scores was performed between Government Colleges, Catholic, and Independent schools only. A mean ATAR score for each Extension School was not provided by TASC for both years.

Excluding the Extension Schools, one-way ANOVA analyses revealed that differences exist between the school sectors in both years, $F_{(2,19)} = 6.83, p < .01$ for 2017 and $F_{(2,19)} = 11.85, p < .001$ for 2018. Specifically, Independent schools' mean ATAR scores are significantly higher than government Colleges (*Mean diff* = 7.01 in 2017 and *Mean diff* = 6.12 in 2018) and Catholic schools (*Mean diff* = 6.28 in 2017 and *Mean diff* = 6.34 in 2018). However, no significant differences are found between Government Colleges and Catholic schools.

Table 4. Average (and Standard Deviation) of Schools' Mean ATAR Score by School Sectors

	2017	2018
Government Colleges	76.33 (3.67)	76.90 (2.10)
Catholic Schools	77.06 (1.63)	76.68 (2.18)
Independent Schools	83.34 (5.39)	83.02 (3.78)
Overall	79.37 (5.25)	79.35 (4.19)

2.3 TCE and ATAR rates of attainment by school socio-educational advantage

Information on the schools' socio-educational background was obtained from the Australian Curriculum, Assessment and Reporting Authority's (ACARA) data published on the MySchool⁷ website. In particular, the Index of Community Socio-Educational Advantage (ICSEA) was used as a marker of schools' socio-educational advantage. For each school, the index is calculated based on students' family data, particularly using their parental education and occupation (ACARA, 2013).

⁷ Australian Curriculum, Assessment and Reporting Authority: MySchool <https://www.myschool.edu.au/>

ICSEA values are calculated based on a scale with a median value of 1000 and a standard deviation of 100. Schools' ICSEA scores typically range from 500 indicating extremely disadvantaged background to 1300 indicating extremely advantaged background. Each year, a school's ICSEA may change based on the students enrolled in that year. However, for the purpose of this report, the school's average ICSEA value was used for determining the school's typical ICSEA score.

Schools were divided into four quartiles (Figure 4). The ICSEA range for each quartile was calculated based on the ICSEAs of the 35 schools included in the sample. The minimum ICSEA score was 830 and the maximum was 1140. The higher the quartile, the better are the schools' socio-educational advantage. The average ICSEA value across all schools is 993.8 (*Standard deviation* = 85.02), which is typical for Tasmanian schools.

As shown in Figure 5 (Panel A), the majority of Year 12 students are enrolled in schools with ICSEA score belonging in the 26th to 75th percentiles or Quartile 2 and 3. About 10% of the students are enrolled in schools in the highest quartile (11.2% in 2017 and 13.6% in 2018) and a little less than 10% of the students are enrolled in schools in the lowest quartile (6.8% in 2017 and 7.0% in 2018).

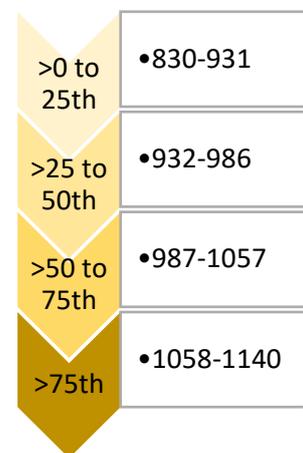


Figure 4. The ICSEA score range for each quartile.

Linking the schools' ICSEA with TCE attainment data, findings indicate that the proportion of TCE recipients between school ICSEA groups is relatively similar to the enrolment data (Figure 5, Panel B). Approximately 40% recipients are in the second and third quartile each (43.6% in 2017 and 43.2% in 2018 for the second quartile; and 37.6% in 2017 and 36.0% in 2018 for the third quartile). The next biggest proportion is the most socio-educationally advantaged group with 13.4% TCE recipients in 2017 and 16.4% TCE recipients in 2018. Finally, students in the least socio-educationally disadvantaged schools make up only about 5% of TCE recipients in both years (5.4% in 2017 and 4.4% in 2018).

When students' ATAR achievements were examined (Figure 5, Panel C), findings indicate that students who achieved an ATAR tend to be from schools with better socio-educational advantage. The third quartile has the largest proportion of ATAR recipients (41.5% in 2017 and 37.6% in 2018) followed by the second quartile (35.4% in 2017 and 35.8% in 2018). Students from the most socio-educationally advantaged schools (highest quartile) represent about a fifth of the ATAR recipients (21.3% in 2017 and 25.0% in 2018). In contrast, students from the least socio-educationally advantaged schools (lowest quartile) represent less than 2% of the ATAR recipients (1.8% in 2017 and 1.6% in 2018).

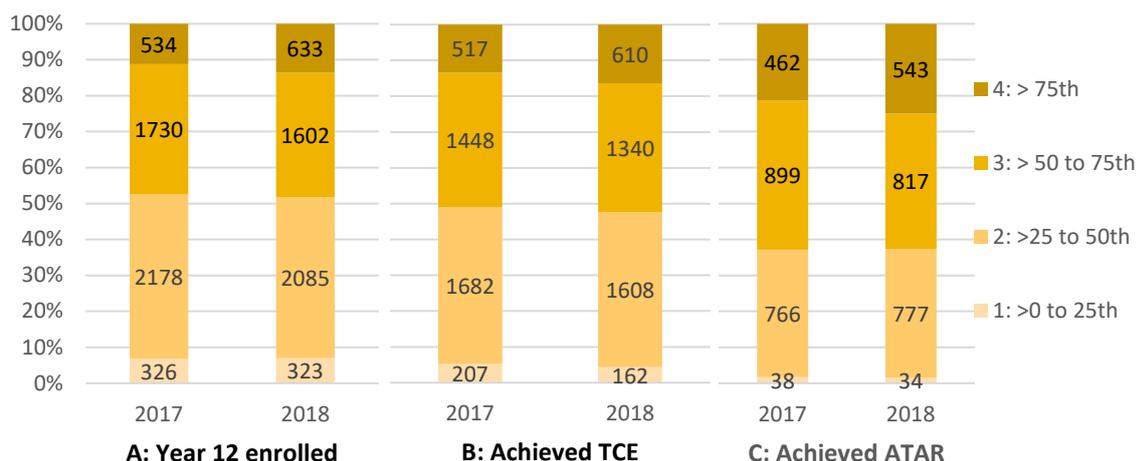


Figure 5. TCE and ATAR attainment by school ICSEA quartile.

*Note: Higher quartiles represent higher socio-economic advantage.

The mean ATAR comparison between the ICSEA groups included the three highest quartiles only, due to lack of data from the lowest quartile (see discussion of this issue in Section 2.2).

Given the overlap between school sectors and schools' ICSEA scores, it was suspected that the mean ATAR scores between the ICSEA groups would also be significantly different. The findings supported this hypothesis showing that there are differences in mean ATAR scores between the ICSEA groups, $F_{(2,18)} = 7.41, p < .01$ for 2017 and $F_{(2,18)} = 10.47, p < .01$ for 2018. Specifically, schools in the highest quartile were significantly different from the other two quartiles, with their mean differences ranged from 5.94 to 7.16 points.

Table 5. Average (and Standard Deviation) of Schools' Mean ATAR Score by School ICSEA Quartile

	2017	2018
ICSEA 2 (>25 to 50 th)	76.40 (3.31)	77.07 (2.27)
ICSEA 3 (>50 to 75 th)	77.40 (1.87)	76.78 (2.12)
ICSEA 4 (>75 th)	83.56 (5.10)	83.01 (3.79)
Overall	79.37 (5.25)	79.35 (4.19)

Note: Higher quartiles represent higher socio-educational advantage. Quartile 1 was not included due to missing data.

Section 3: TASC “Outstanding Achievement Awards” 2018 and 2019

The office of Tasmanian Assessment, Standards, and Certification (TASC) recognises outstanding achievement by students in the Tasmanian Certificate of Education (TCE) in two categories: ‘Vocational Education and Training’ and ‘Academic’. These are described as follows by TASC:

OUTSTANDING ACHIEVEMENT IN VOCATIONAL EDUCATION AND TRAINING AWARD



Outstanding Achievement in Vocational Education and Training (VET) Award recipients have demonstrated excellence in a VET program and successfully achieved the Tasmanian Certificate of Education (TCE), including having completed a significant amount of VET as a component of the TCE.

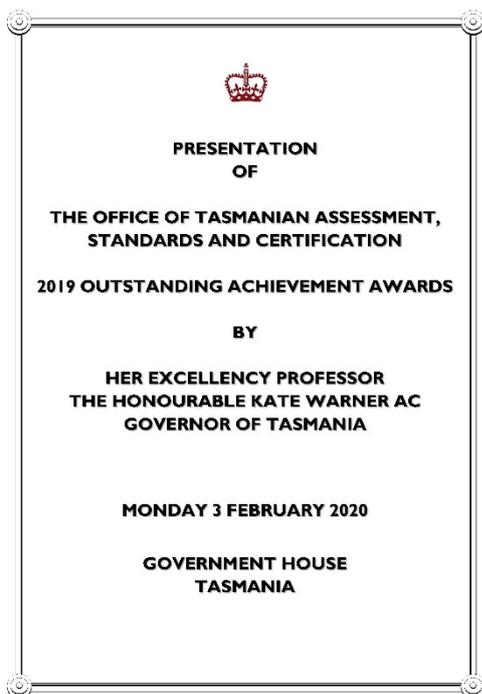
VET Award recipients were selected, from nominated students, by a panel of experts with extensive experience in VET and the education sector. The panel’s decision was based on nominees’ outstanding achievement against the eligibility criteria, including demonstrated skill, ability, and determination in their chosen industry area.

OUTSTANDING ACHIEVEMENT ACADEMIC ACHIEVEMENT AWARD



The Outstanding Academic Achievement Award recognises students who achieved an Australian Tertiary Admission Rank of 99.5 or above while completing their senior secondary studies.

These students have attained the highest academic results in Tasmania in 2018 or 2019.



The awards are formally presented to students by Her Excellency Professor the Honourable Kate Warner AC, Governor of Tasmania, at a ceremony held at Government House in Hobart.

For this occasion, TASC produces a booklet listing all award recipients, including a brief passage about the recipient and their plans for the future. These booklets are in the public domain in hard copy, and all award recipients also are listed in the TASC annual report. For ease of analysis, TASC provided the booklets for the 2018 and 2019 award recipients as soft copies, with student names removed.

This section provides an analysis of the information provided in these booklets, offering insights into the post-school pathway plans of some of the best and brightest young Tasmanians.

Across 2018 and 2019, there were 56 recipients of VET Awards and 59 recipients of Academic Awards. Figure 6 and 7 provide information about the background of the award recipients. Gender is based on the passage for each person in the booklets, which usually referred to the award recipient as he or she—or on the school being single sex. In some passages where no such pronoun is used and the school is coeducational, the gender is therefore unknown. VET Awards were much more commonly received by young women and Academic Awards somewhat more commonly by young men.

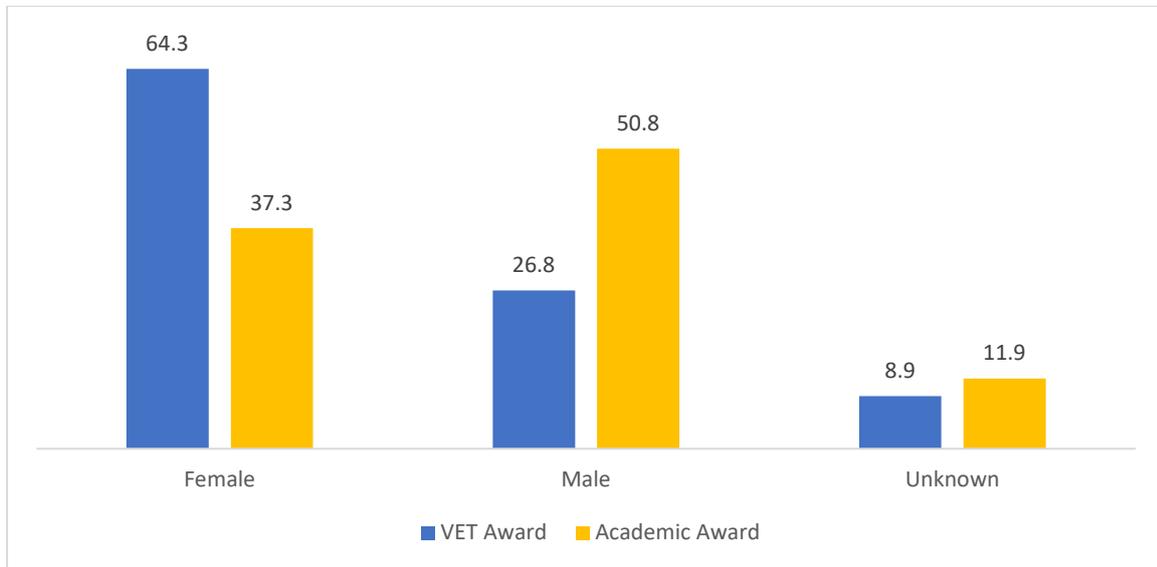


Figure 6. Gender of 2018 and 2019 VET and Academic Award recipients (%).

For all recipients, the booklet named the educational institution where they completed their TCE. For the VET awards, one recipient had a dual enrolment across a government and an independent school (not shown in the diagram). As shown in Section 2, in 2018, 64.7% of TCE graduates came from government schools. This means graduates from government schools did relatively well in the VET Awards, receiving 78.6% of these awards. In contrast, in 2018, only 16.3% of TCE graduates came from Independent schools, yet 45.8% of Academic Awards went to young people from these schools.

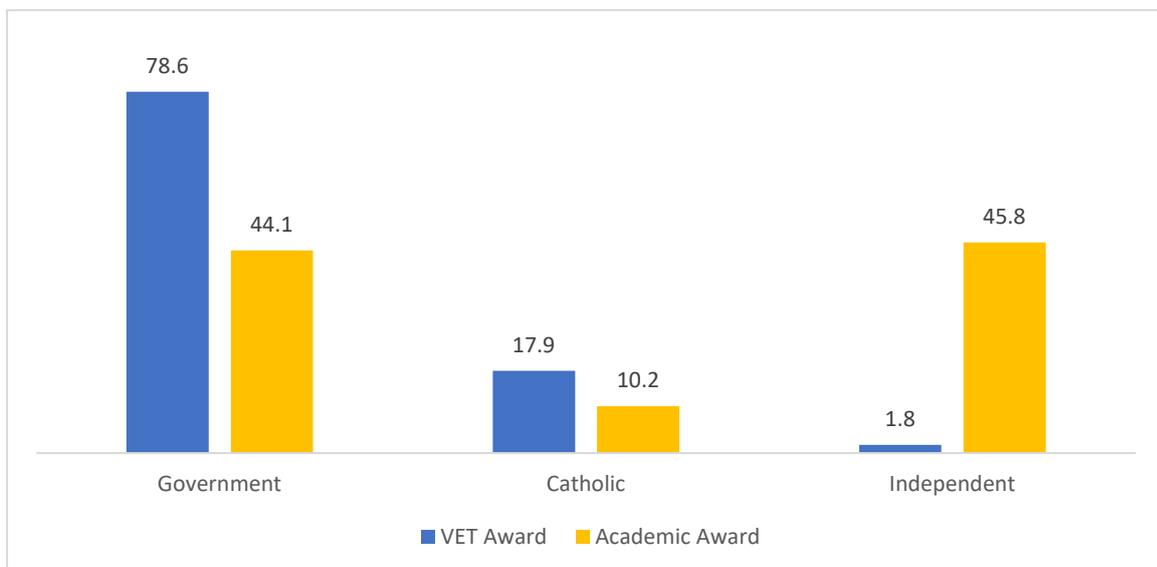


Figure 7. School sector of 2018 and 2019 VET and Academic Award recipients (%).

3.1 Post-school pathway plans

VET and Academic Award recipients had very different plans for their post-school pathways, as indicated by the passages in the booklet. For Academic Award recipients, the findings are very straightforward:

- Almost all (98.3%) of Academic Award recipients planned on going to university either in the year after completing high school or following a gap year.
- The remaining 1.7% applies to one person who did not indicate the type of pathway they were going to pursue after school.

In contrast, the analysis shows that VET Award recipients post-school pathways had more diverse plans, and these often included employment—on its own or in combination with study (see Figure 8)

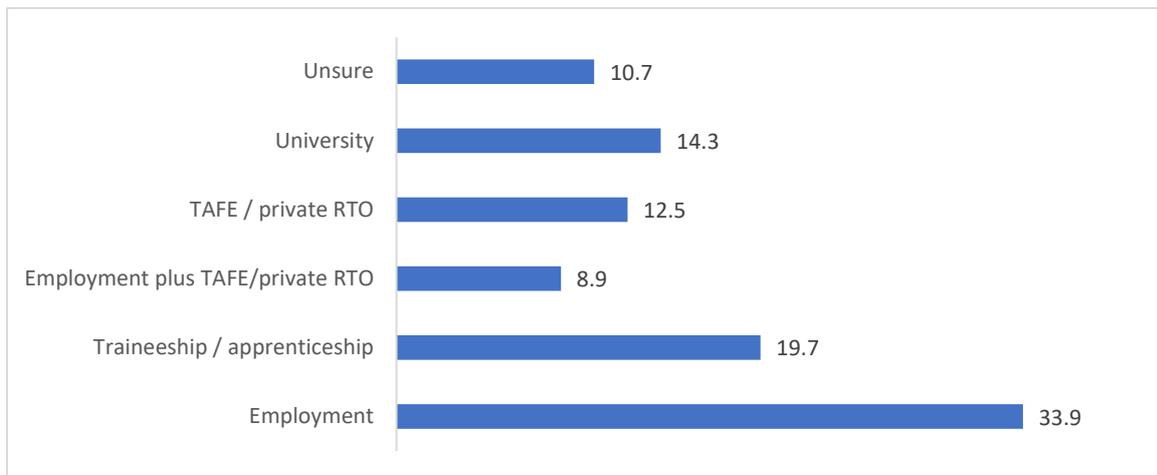


Figure 8. Post-school pathway plans – VET Award recipients (%).

For a large number of young people, no information was included about the location of their post-school plans (i.e. for over half of VET Award recipients and almost one-third of Academic Award recipients). With that proviso, overall these findings suggest that VET Award recipients were more likely to plan to stay in Tasmania, while Academic Award recipients had a slightly higher preference for pursuing their post-school plan interstate.

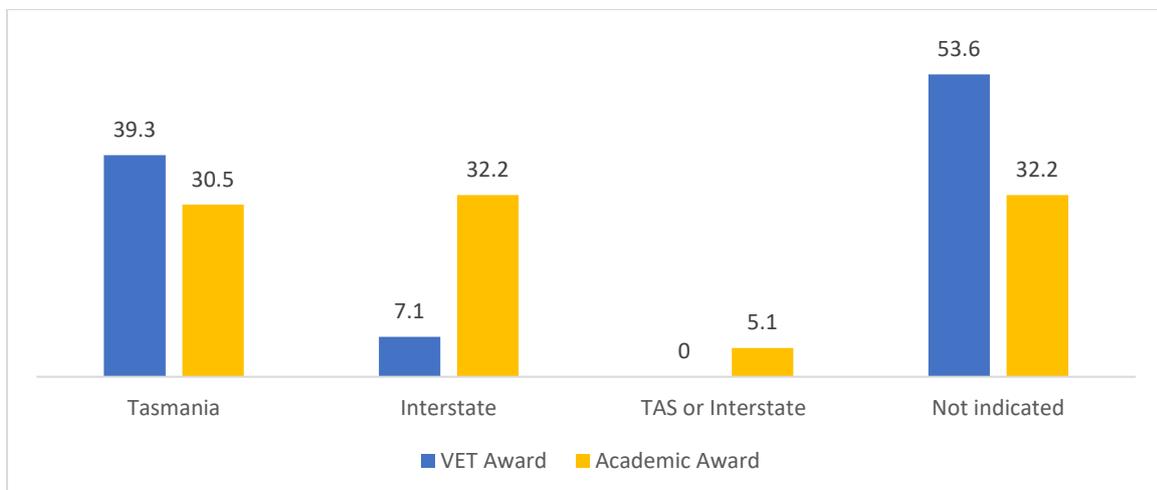


Figure 9. Location of post-school plans (%).

A small number of Academic Award recipients listed both Tasmania and interstate as possibilities. An example of the latter is: “X is planning to study medicine at either the University of Tasmania or Monash University.” It seems that these young people were not so much undecided, but rather waiting to find out which university would offer them a place.

3.2 Gap years, travel, and ambiguity

For a small number of students, their passage explicitly mentioned their intention to travel or have a gap year after completing school: 8 (14.3%) of VET Award recipients and 6 (10.2%) of Academic Award recipients. Sometimes they had clear pathway plans for work or study after their return— included in the findings in Section 3.1 above. Examples include:

... hopes to spend 2020 exploring the world. His goal is to pursue his passion and work in the tourism industry in future years. [VET Award]

... will work and travel in 2019 and plans to attend the University of Melbourne in 2020 to study a Bachelor of Science. In the future, she hopes to pursue a career in the maths or science field. [Academic Award]

For two VET Award recipients, no specific plan for after their travel or gap year was included, for example:

... plans to have a gap year in 2019 and travel. In the future she hopes to always be learning and using the skills developed through her VET training.

These are included in the ‘unsure’ category in Figure 8. In addition, there were 5 recipients (4 VET and 1 Academic Award) for whom the passage was quite ambiguous, not indicating a specific post-school plan:

... plans on continuing in her study in 2020 and hopes to work in a career that fulfils her passions. [VET Award]

... In 2020 and beyond X hopes to finalise his future pathway and perhaps explore other pathways. His primary goal is to branch out from his comfort zone and experience new opportunities. X’ aspiration and long-term aim is to have a positive and lasting impact on society. [Academic Award]

3.3 Industry or field preferences for post-school work or study

The passages about the award recipients and their plans for the future often indicated the type of industry they hoped to work or study in. For this analysis, these have been clustered into coherent fields, as shown in Figure 10.

Some award recipients indicated they intend to pursue a pathway or area of post-school study that encompasses two industries. In this instance, both industries have been counted. The passage for almost 10% of VET Award recipients and almost 9% of Academic Award receipts did not clearly indicate any specific industry or field.

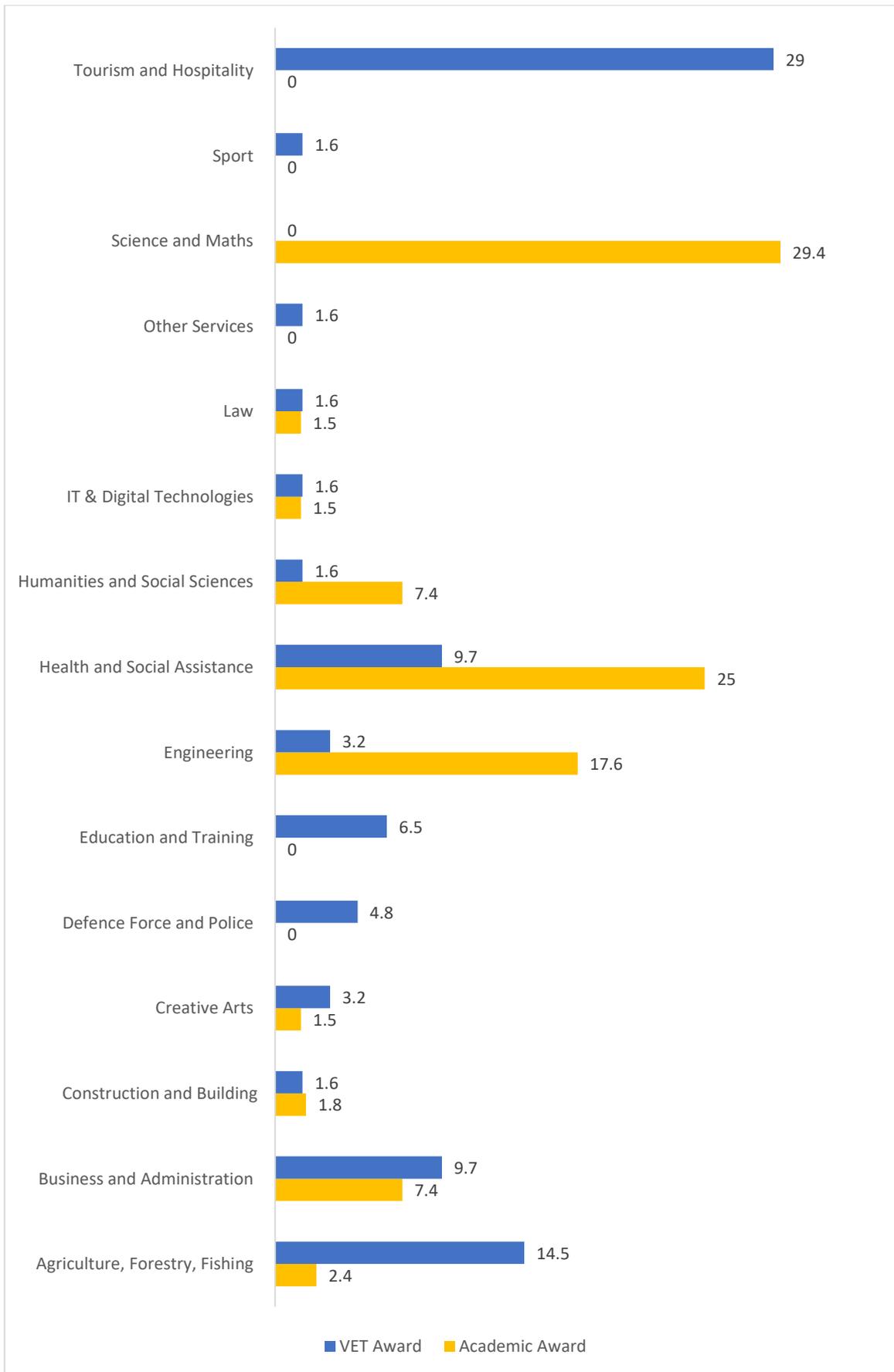


Figure 10. Preferred industry or field (%).

The top industry preferences of VET and Academic Award recipients were quite different. Figure 11 highlights the most common industries or fields, illustrated with excerpts from the booklets.

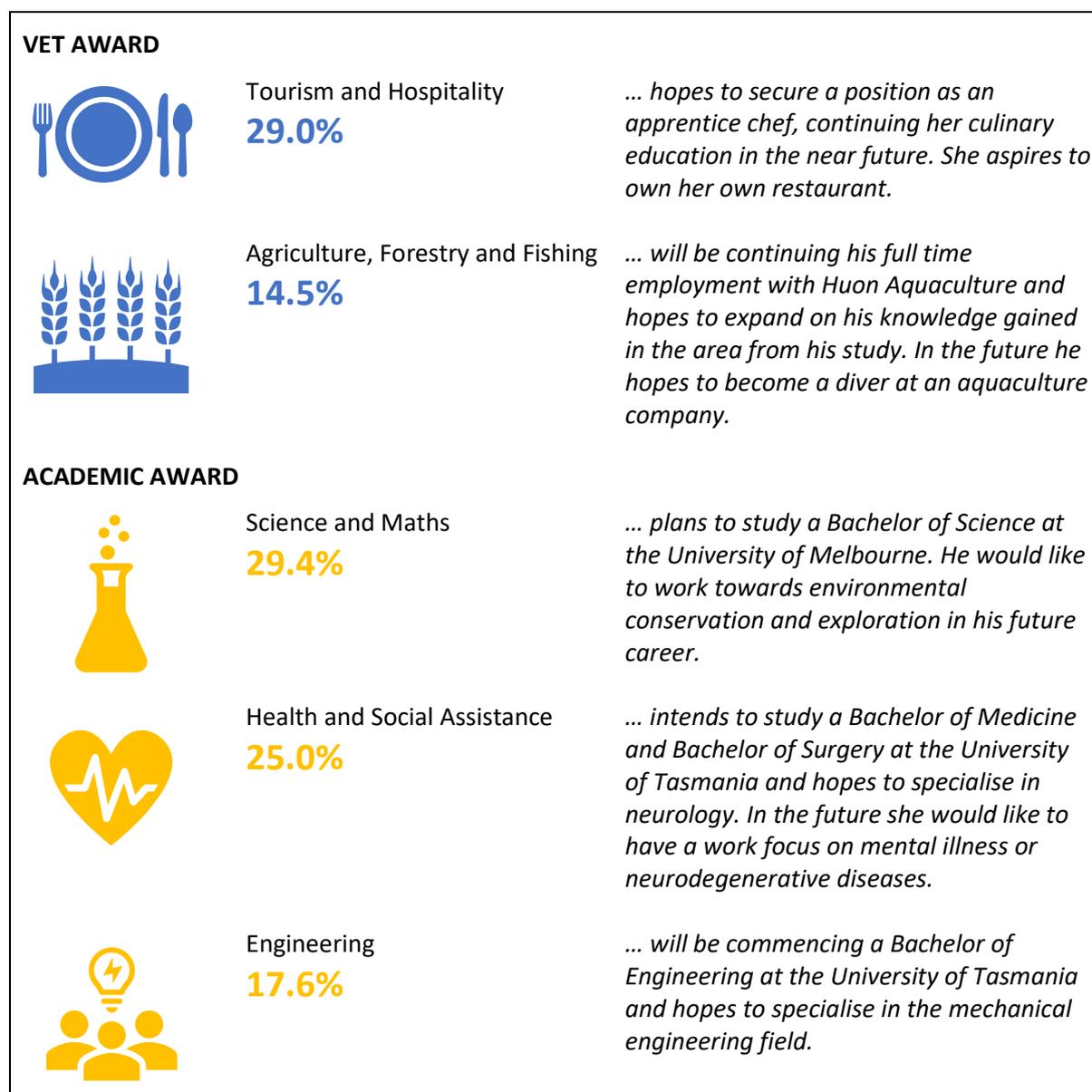


Figure 11. Highly preferred industries and fields.

For VET Award recipients, overwhelmingly the post-school pathway they aspire to aligns closely with the VET qualification they obtained as part of their TCE and for which they received their award:

- 69.4% plan to pursuing a pathway in an industry related to their qualification;
- 12.9% aspire to work or study in an industry that was unrelated to their VET qualification;
- 17.7% are unsure about the industry or field they would like to pursue.

Overall, the analysis of the TASC award booklets indicates that most Tasmanian high achievers have clear post-school plans for further study and/or work across a wide range of industries/fields.

Section 4: Tasmanian secondary school students' application to the University of Tasmania

In Phase Three of this research, the main interest is in examining Tasmanian secondary school students' choices for university learning as demonstrated by their applications to the University of Tasmania. Along with examining what courses students applied to study at the University of Tasmania and in which areas students are enrolled at the University of Tasmania, initially, the intention was to also examine the types of courses enrolled University of Tasmania students completed during their Year 10 to 12. However, the Business Intelligence (BI) data supplied by the University did not include this information. For this reason, analysis was focused on unpacking Tasmanian students' application (Section 4) and enrolment (Section 5) patterns.

Overview of Tasmanian University of Tasmania applicants

In total, there are 3360 applicants in 2017 and 3235 applicants in 2018. The data set provided included students who had taken a 'gap year'. For the purposes of this analysis, providing Year 12 school was known, these students were included. The number of male and female applicants are relatively equal in both years. Each applicant may submit multiple applications and indicate their order of preference for the programs they applied. Based on the data (Figure 12), most applications are to study at the main Hobart campus.

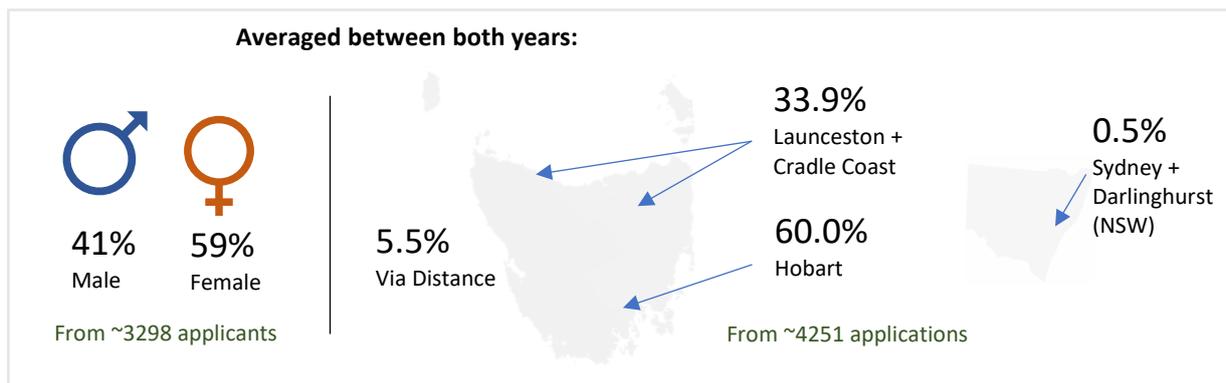


Figure 12. Gender composition of the applicants and location(s) of study students applied for.

4.1 Applicants by region

Taking into account both 2017 and 2018 applications (Figure 13), findings indicate that there are about a quarter of applicants from the Northern region (24.4% in 2017 and 26.4% in 2018), which is significantly less than the expected proportion based on the state's data, $\chi^2_{(2)} = 15.35$, $p < .01$ for 2017 and $\chi^2_{(2)} = 26.19$, $p < .001$. The remaining applicants include approximately 20% from the North-West region (19.2% in 2017 and 19.0% in 2018) and most are from the Southern region (56.4% in 2017 and 54.6% in 2018).

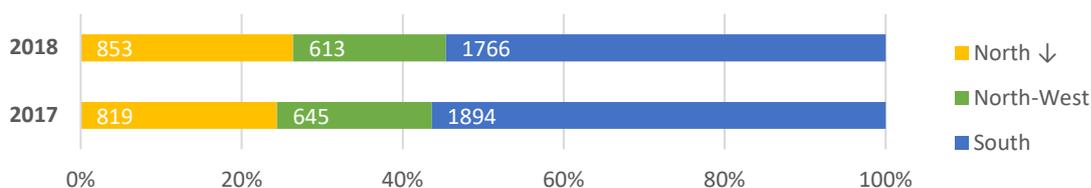


Figure 13. Undergraduate University of Tasmania applicants by region.

4.2 Applicants by school sectors

In comparison to the state’s data on ATAR achievements, University of Tasmania application data from 2017 indicate that there are significantly fewer applicants from government Extension Schools (0.4%) and slightly fewer applicants from Catholic schools (22.3%), $\chi^2_{(3)} = 22.1, p < .0001$. Similar to the expected proportions, however, most applicants are from government Colleges (56.0%) and about a fifth come from Independent schools (21.4%).

In the following year, there are significantly fewer applicants from Independent schools (19.7%) and, again, from government Extension Schools (0.6%), $\chi^2_{(3)} = 72.5, p < .0001$. Although reduced in number, the same chi-square test indicates that there are significantly higher than expected proportion of applicants from government Colleges in 2018 (57.2%). The number of applicants from Catholic schools is as expected in that year (22.6%).

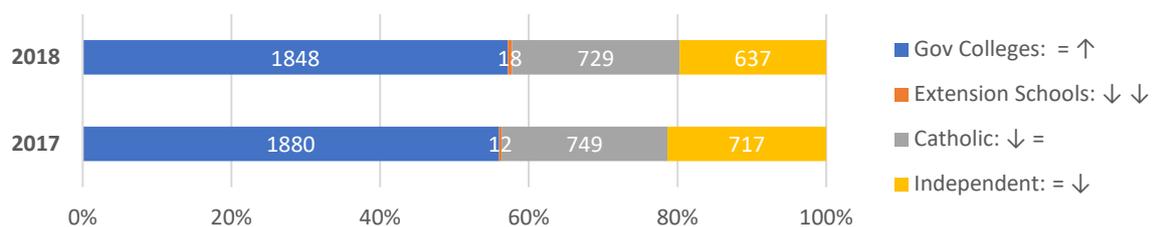


Figure 14. Undergraduate University of Tasmania applicants by school sectors.

4.3 Applicants by school ICSEA quartile

Proportions of applicants as categorised into their school socio-educational advantage (ICSEA) group were examined. Analysis from the two years, separately, produced somewhat different findings. A chi-square test performed on the 2017 data indicates that there are slightly more applicants in the lowest quartile (2.4%). However, a more conservative estimates dictates that the proportions of applicants in 2017 are not significantly different from what is expected based on the state’s ATAR achievements, $\chi^2_{(3)} = 9.8, p = .02$.

In contrast, a chi-square test performed on the 2018 data shows that the observed proportions are significantly different than expected for all quartiles except the second, $\chi^2_{(3)} = 55.6, p < .001$. In particular, there are more than expected applicants from the least socio-educationally advantaged schools (2.6%) but fewer than expected applicants from the most socio-educationally advantages schools (20.5%). The proportion of applicants from the third quartile is also more than expected (40.9%), but the proportion of applicants from the second quartile remains as expected (36.0%).

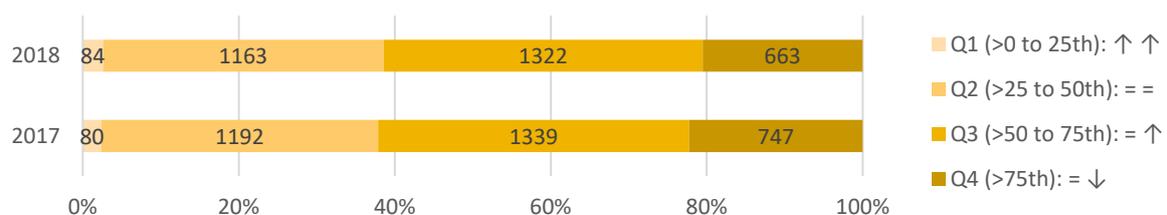


Figure 15. Undergraduate University of Tasmania applicants by school ICSEA band.

4.4 Application by broad areas of interests

The next set of analyses was performed at the application level and not at the individual applicant level. As such, the total number is larger because an applicant can put in multiple applications to multiple different areas of study. There are 6362 unique applications in 2017 and 6593 unique applications in 2018.

Students' applications were categorised into 10 broad study areas (left column in Table 6) and 20 sub-study areas (right column in Table 6). The sub-areas were identified first by Professor Natalie Brown who is currently serving as the chair of the University of Tasmania Academic Senate. The sub-areas were then categorised at a broader level to facilitate a more general interpretation of findings. The list of broad and sub study areas is provided in Table 6. Readers may refer to the appendix for a more detailed information on the types of degree programs included in each category.

Table 6. Broad and Sub Areas of Study

Broad Area (N = 10)	Sub Areas and Its Code (N = 20)
Architecture, Design & Creative Arts	<ul style="list-style-type: none"> • Architecture (ARCHI) • Creative Arts (CREVA)
Arts & Humanities	<ul style="list-style-type: none"> • General Arts (GENART) • Humanities (HUMAN)
Business & Commerce	<ul style="list-style-type: none"> • Business (BUSI) • Economics (ECON)
Education	<ul style="list-style-type: none"> • Education (ED)
Engineering & Technology	<ul style="list-style-type: none"> • Engineering and Australian Maritime Studies (ENG/AMC) • Information and computer technology (ICT)
Generic Pathway	<ul style="list-style-type: none"> • Generic Pathway (GENPATH)
Health Sciences	<ul style="list-style-type: none"> • Medicine (MED) • Nursing (NURSING) • Paramedicine (PARAMED) • Pharmacy (PHARM) • Health - other (HEALTH)
Law	<ul style="list-style-type: none"> • Law (LAW)
Natural Sciences	<ul style="list-style-type: none"> • Agriculture and Aquaculture (AQRI/AQUA) • Science (SCIENCE)
Social and Behavioural Sciences	<ul style="list-style-type: none"> • Psychology (PSYC) • Social Science (SOCIALSC)

Descriptive analysis of the applications, overall, demonstrates several “hot” areas of study (Figure 16). These are identified based on the frequency of applications across all study areas. From the highest proportion, the hot areas include: Generic Pathway, Health, General Arts, Science, Nursing, Education, Business, and Creative Arts.

It is not surprising to see that there are many applications to the Generic Pathway program because students may still be exploring their interests, or undertaking further preparation for University study. Looking at the broader level, close to a third of the interests are in the University of Tasmania' Health Sciences program, perhaps due to its large offerings.

2017				2018			
ARCHI	1.56%	Architecture, Design & Creative Arts	7.43%	ARCHI	1.79%	Architecture, Design & Creative Arts	8.15%
CREVA	5.88%			CREVA	6.36%		
GENART	9.45%	Arts & Humanities	9.79%	GENART	8.77%	Arts & Humanities	9.15%
HUMAN	0.35%			HUMAN	0.38%		
BUSI	6.48%	Business & Commerce	8.68%	BUSI	6.01%	Business & Commerce	8.24%
ECON	2.20%			ECON	2.23%		
ED	6.46%	Education	6.46%	ED	7.19%	Education	7.19%
ENG/AMC	3.47%	Engineering & Technology	5.82%	ENG/AMC	4.03%	Engineering & Technology	6.40%
ICT	2.34%			ICT	2.37%		
GENPATH	12.81%	Generic Pathway	12.81%	GENPATH	14.92%	Generic Pathway	14.92%
MED	3.55%	Health Sciences	26.49%	MED	2.93%	Health Sciences	24.80%
NURSING	6.84%			NURSING	7.46%		
PARAMED	3.32%			PARAMED	3.09%		
PHARM	2.11%			PHARM	2.03%		
HEALTH	10.67%			HEALTH	9.28%		
LAW	4.54%	Law	4.54%	LAW	4.41%	Law	4.41%
AGRI/AQUA	1.05%	Natural Sciences	9.54%	AGRI/AQUA	1.35%	Natural Sciences	9.21%
SCIENCE	8.49%			SCIENCE	7.86%		
PSYC	4.86%	Social & Behavioural Sciences	8.44%	PSYC	3.87%	Social & Behavioural Sciences	7.54%
SOCIALSC	3.58%			SOCIALSC	3.67%		

Figure 16. Heat maps showing hot study areas (sub and broad categories; 2017 and 2018).

Study areas by geographical region

Applicants were grouped by geographical regions to examine if there are differences in terms of their interested study areas (Figure 11). The top three hot areas for each region are noted below.

For the **Northern** applicants, their hot study areas include: Generic Pathway, Health, and General Arts. Business appeared more popular in 2017 and Education appeared more popular in 2018.

Education seemed consistently more popular for the **North-West** applicants. Their other top interests include: Generic Pathway, Health, and Nursing.

Unlike the other regions, Science is a more popular study area for the **Southern** applicants. This may be because the Science courses or programs at the University of Tasmania are well marketed in the South through events such as the Festival of Bright Ideas. However, similar to the other regions, other top interests in the South include Generic Pathway, General Arts, and Health.

2017				2018			
	North	NorthWest	South		North	NorthWest	South
ARCHI	1.75%	1.59%	1.47%	ARCHI	2.04%	2.05%	1.60%
CREVA	5.69%	4.40%	6.39%	CREVA	6.68%	4.89%	6.66%
GENART	8.53%	8.61%	10.05%	GENART	7.38%	6.79%	10.02%
HUMAN	0.52%	0.09%	0.35%	HUMAN	0.13%	0.24%	0.53%
BUSI	8.02%	7.30%	5.61%	BUSI	6.87%	5.45%	5.84%
ECON	2.52%	1.31%	2.32%	ECON	1.91%	1.58%	2.59%
ED	7.05%	9.73%	5.29%	ED	9.48%	10.89%	4.98%
ENG/AMC	3.75%	3.84%	3.26%	ENG/AMC	4.52%	3.24%	4.10%
ICT	2.33%	1.59%	2.56%	ICT	2.99%	1.74%	2.32%
GENPATH	14.09%	16.28%	11.30%	GENPATH	17.38%	15.47%	13.73%
MED	4.20%	2.62%	3.55%	MED	2.48%	3.16%	3.04%
NURSING	5.56%	8.33%	6.95%	NURSING	6.81%	8.76%	7.30%
PARAMED	2.39%	2.90%	3.82%	PARAMED	2.04%	4.18%	3.17%
PHARM	1.94%	2.71%	2.00%	PHARM	1.78%	2.45%	2.00%
HEALTH	10.86%	11.79%	10.26%	HEALTH	8.72%	10.89%	8.98%
LAW	4.52%	3.09%	4.94%	LAW	4.01%	3.31%	4.93%
AGRI/AQUA	1.29%	1.12%	0.94%	AGRI/AQUA	0.95%	1.34%	1.52%
SCIENCE	6.85%	6.74%	9.67%	SCIENCE	6.87%	7.02%	8.56%
PSYC	5.43%	2.99%	5.16%	PSYC	4.01%	2.92%	4.13%
SOCIALSC	2.71%	2.99%	4.11%	SOCIALSC	2.93%	3.63%	4.00%

Figure 17. Heat maps showing hot sub-areas between geographical regions (2017 and 2018).

At a broader level (Figure 18), Health Sciences and Generic Pathway remained a popular choice across regions. At or above 10%, Business and Commerce is popular in the North in 2017, and Education is a popular in the North West in both years. Natural Sciences and Arts and Humanities are equally popular amongst the Southern applicants (10.39% versus 10.61% in 2017; 10.55% versus 10.07% in 2018).

2017				2018			
	North	NorthWest	South		North	NorthWest	South
Architecture, Design & Creative Arts	7.43%	5.99%	7.85%	Architecture, Design & Creative Arts	8.72%	6.95%	8.26%
Arts & Humanities	9.05%	8.70%	10.39%	Arts & Humanities	7.51%	7.02%	10.55%
Business & Commerce	10.54%	8.61%	7.93%	Business & Commerce	8.78%	7.02%	8.42%
Education	7.05%	9.73%	5.29%	Education	9.48%	10.89%	4.98%
Engineering & Technology	6.08%	5.43%	5.82%	Engineering & Technology	7.51%	4.97%	6.42%
Generic Pathway	14.09%	16.28%	11.30%	Generic Pathway	17.38%	15.47%	13.73%
Health Sciences	24.95%	28.34%	26.58%	Health Sciences	21.83%	29.44%	24.49%
Law	4.52%	3.09%	4.94%	Law	4.01%	3.31%	4.93%
Natural Sciences	8.14%	7.86%	10.61%	Natural Sciences	7.83%	8.37%	10.07%
Social & Behavioural Sciences	8.14%	5.99%	9.27%	Social & Behavioural Sciences	6.94%	6.55%	8.13%

Figure 18. Heat maps showing hot broad areas between geographical regions.

Study areas by school sector

In terms of differences in top study areas between school sectors (Figure 19), caution should be exercised when interpreting the proportion of applications coming from Extension Schools, because the range is narrower with total applications in each sub area ranging from 1 to 7.

The top three hot sub areas for **Government College** applicants include: Generic Pathway, General Arts, and Health. The least popular choices for applicants in this category are Agri- or Aquaculture and Humanities.

From a small number of applications coming from **Extension Schools**, the top interests include General Arts, Generic Pathway, and Education. Health appeared popular for 2018 applicants from Extension Schools.

Health is a more popular choice among applicants from **Catholic schools** compared to the other schools. Applicants in this category are also quite interested in the General Arts, Nursing, Generic Pathway, and Science. The least popular choice for them is Humanities, and to some extent Architecture (more so in 2017).

Applications from **Independent schools** are well aligned with the overall sample with their top three areas being Generic Pathway, Health, and General Arts. Like the other school sectors, Humanities remained an unpopular choice.

	2017					2018			
	Gov Colleges	Extension Schools	Catholic Schools	Ind. Schools		Gov Colleges	Extension Schools	Catholic Schools	Ind. Schools
ARCHI	1.39%	0.00%	0.94%	2.62%	ARCHI	1.47%	0.00%	1.94%	2.51%
CREVA	6.88%	10.00%	4.02%	5.59%	CREVA	6.79%	7.89%	4.91%	6.80%
GENART	10.55%	25.00%	9.11%	7.04%	GENART	9.02%	18.42%	8.30%	8.43%
HUMAN	0.39%	0.00%	0.25%	0.35%	HUMAN	0.48%	0.00%	0.30%	0.22%
BUSI	6.43%	10.00%	7.10%	5.87%	BUSI	5.41%	10.53%	6.42%	6.95%
ECON	1.91%	0.00%	2.20%	2.90%	ECON	1.89%	0.00%	1.94%	3.55%
ED	6.88%	15.00%	6.66%	5.18%	ED	7.86%	13.16%	8.00%	4.29%
ENG/AMC	3.24%	0.00%	3.08%	4.49%	ENG/AMC	3.58%	0.00%	4.12%	5.25%
ICT	2.73%	0.00%	1.70%	2.21%	ICT	2.62%	0.00%	1.94%	2.29%
GENPATH	14.91%	15.00%	8.42%	12.85%	GENPATH	17.86%	18.42%	10.97%	11.97%
MED	2.64%	0.00%	3.64%	5.59%	MED	2.11%	0.00%	2.73%	5.40%
NURSING	6.37%	5.00%	8.79%	5.80%	NURSING	7.64%	5.26%	9.15%	5.03%
PARAMED	2.76%	0.00%	4.40%	3.45%	PARAMED	2.70%	2.63%	4.12%	2.88%
PHARM	2.06%	0.00%	2.70%	1.59%	PHARM	1.61%	0.00%	2.67%	2.44%
HEALTH	9.67%	0.00%	13.13%	10.36%	HEALTH	8.88%	13.16%	10.42%	8.87%
LAW	3.76%	0.00%	4.77%	6.08%	LAW	3.89%	0.00%	4.18%	6.13%
AGRI/AQUA	0.82%	10.00%	1.26%	1.24%	AGRI/AQUA	0.90%	0.00%	1.58%	2.29%
SCIENCE	8.43%	10.00%	8.29%	8.84%	SCIENCE	7.69%	5.26%	8.30%	7.83%
PSYC	4.40%	0.00%	5.28%	5.52%	PSYC	3.86%	2.63%	3.94%	3.84%
SOCIALSC	3.79%	0.00%	4.27%	2.42%	SOCIALSC	3.75%	2.63%	4.06%	3.03%

Figure 19. Heat maps showing hot sub-areas between school sectors.

Looking at the broad study areas between school sectors (Figure 20), Health Sciences shows up as an unpopular choice amongst applicants from Extension Schools, particularly in 2017. In that year, applicants seem to favour Natural Sciences and Arts and Humanities program.

For the other school sectors, Health Sciences remained a popular choice in both years. Independent schools recorded fewer applications to the Education program in both years. Applications to the Law program are low for both Government Colleges and Catholic schools in both years. Applied creative or innovative discipline of studies, such as Architecture and Design as well as Engineering and Technology, are unpopular amongst Catholic school applicants in 2017. However, the same pattern is not observed in 2018.

	2017				2018			
	Gov Colleges	Extension Schools	Catholic Schools	Ind. Schools	Gov Colleges	Extension Schools	Catholic Schools	Ind. Schools
Architecture, Design & Creative	8.28%	10.00%	4.96%	8.22%	8.26%	7.89%	6.85%	9.31%
Arts & Humanities	10.94%	25.00%	9.36%	7.39%	9.50%	18.42%	8.61%	8.65%
Business & Commerce	8.34%	10.00%	9.30%	8.77%	7.30%	10.53%	8.36%	10.50%
Education	6.88%	15.00%	6.66%	5.18%	7.86%	13.16%	8.00%	4.29%
Engineering & Technology	5.97%	0.00%	4.77%	6.70%	6.20%	0.00%	6.06%	7.54%
Generic Pathway	14.91%	15.00%	8.42%	12.85%	17.86%	18.42%	10.97%	11.97%
Health Sciences	23.49%	5.00%	32.66%	26.80%	22.94%	21.05%	29.09%	24.61%
Law	3.76%	0.00%	4.77%	6.08%	3.89%	0.00%	4.18%	6.13%
Natural Sciences	9.25%	20.00%	9.55%	10.08%	8.59%	5.26%	9.88%	10.13%
Social & Behavioural	8.18%	0.00%	9.55%	7.94%	7.61%	5.26%	8.00%	6.87%

Figure 20. Heat maps showing hot broad areas between school sectors.

Study areas by school ICSEA quartile

The last portion of this set of analyses involves looking at hot study areas between schools with different levels of socio-educational advantage (ICSEA). Like before, schools were grouped into quartiles based on their average ICSEA score (see Figure 21).

Findings indicate that the top study areas for applications coming from the least socio-educationally advantaged schools (**Quartile 1**) somewhat vary between the two application years. In 2017, the top three areas include: General Arts, Generic Pathway, and Education—each reached over 10% of the applications. In the following year, Generic Pathway is the most popular choice. Areas that reached over 10% of the applications in 2018 include Nursing, Health, and General Arts. Looking at both years, apart from Humanities, Medicine is one of the least popular choices for this group of schools but its popularity improved slightly in the following year.

The patterns are somewhat reversed for applications coming from **Quartile 2** schools (>25 to 50th percentile), particularly for the Education program: Education is more popular in the second than the first application year. In 2017, top three areas for this group of schools include: Generic Pathway, General arts, and Health. However, in the following years, Education took the place of General Arts, while the other two areas remained their standing. Apart from Humanities, Agri- and Aquaculture is consistently one of the least popular area for this group of schools.

For schools grouped under **Quartile 3** (>50 to 75th percentile), there is quite a bit of variation for applications in 2017. Applications to the Health and Generic Pathway programs are equally popular, and General Arts and Science are the next two equally popular programs. In the following year, applications to the Health program are fewer than the year before, but the program is still one of the top choices for applicants coming from Quartile 3 schools. Specifically, in 2018, the top three areas for this group of schools include: Generic Pathway, Health, and Science. A clear least popular area is Humanities, similar to the other quartiles.

For schools with the highest socio-educational advantage (**Quartile 4**), top areas between the two application years include: Generic Pathway, Health, Science, and General arts. Areas that are not popular in other quartiles (coloured blue) but are somewhat popular in this quartile include Medicine and Law. This quartile tends to have a significantly higher mean ATAR score (see Section 2.3) which affords more applications to a more competitive programs such as Medicine and Law.

	2017				2018			
	Q1 (>0 to 25th)	Q2 (>25 to 50th)	Q3 (>50 to 75th)	Q4 (>75th)	Q1 (>0 to 25th)	Q2 (>25 to 50th)	Q3 (>50 to 75th)	Q4 (>75th)
ARCHI	2.16%	1.45%	1.07%	2.47%	0.67%	1.54%	1.79%	2.31%
CREVA	7.19%	6.44%	5.69%	5.33%	6.67%	6.24%	6.14%	6.79%
GENART	13.67%	10.27%	9.97%	7.02%	10.67%	8.46%	8.85%	8.89%
HUMAN	0.72%	0.29%	0.34%	0.39%	0.00%	0.14%	0.64%	0.28%
BUSI	8.63%	7.61%	5.77%	5.98%	4.67%	6.06%	5.61%	6.86%
ECON	1.44%	1.70%	2.29%	2.79%	1.33%	1.45%	2.32%	3.36%
ED	10.79%	8.38%	5.50%	5.13%	8.00%	9.95%	6.43%	4.34%
ENG/AMC	1.44%	3.20%	3.44%	4.09%	0.67%	3.26%	4.36%	4.97%
ICT	2.16%	2.57%	2.37%	2.01%	1.33%	2.40%	2.50%	2.17%
GENPATH	11.51%	15.26%	11.20%	12.41%	24.67%	19.00%	13.07%	11.27%
MED	0.72%	2.33%	3.55%	5.46%	1.33%	2.13%	2.46%	5.25%
NURSING	3.60%	6.44%	7.72%	6.17%	12.00%	8.05%	7.64%	5.74%
PARAMED	2.16%	2.28%	3.86%	3.90%	2.00%	2.76%	3.43%	3.08%
PHARM	2.16%	1.94%	2.45%	1.75%	1.33%	1.54%	2.25%	2.45%
HEALTH	6.47%	10.08%	11.27%	10.79%	11.33%	9.00%	9.46%	9.17%
LAW	4.32%	3.63%	4.43%	5.91%	0.67%	3.57%	4.36%	6.16%
AGRI/AQUA	2.88%	0.73%	1.07%	1.30%	0.67%	0.86%	1.32%	2.24%
SCIENCE	5.04%	7.07%	9.71%	8.64%	5.33%	6.43%	9.14%	7.84%
PSYC	7.19%	4.55%	4.47%	5.72%	2.00%	3.71%	4.11%	3.85%
SOCIALSC	5.76%	3.78%	3.82%	2.73%	4.67%	3.44%	4.14%	3.01%

Figure 21. Heat maps showing hot sub-areas between school ICSEA quartiles.

Analysing the patterns at the broader level (Figure 22), the data show that Arts and Humanities (for both years) as well as Social and Behavioural Sciences (in 2017 only) are more popular in the least socio-educationally advantaged schools than the other ICSEA groups. Education is more popular for schools in the lower end of the index of socio-educational advantage (Quartile 1 and 2). In contrast, Natural Sciences is more popular for schools in the higher end of the index of socio-educational advantage (Quartile 3 and 4). Across all ICSEA groups, Health Sciences and Generic Pathway are most common.

2017					2018				
	Q1 (>0 to 25th)	Q2 (>25 to 50th)	Q3 (>50 to 75th)	Q4 (>75th)		Q1 (>0 to 25th)	Q2 (>25 to 50th)	Q3 (>50 to 75th)	Q4 (>75th)
Architecture, Design & Creative	9.35%	7.90%	6.76%	7.80%	Architecture, Design & Creative	7.33%	7.78%	7.93%	9.10%
Arts & Humanities	14.39%	10.56%	10.32%	7.41%	Arts & Humanities	10.67%	8.60%	9.50%	9.17%
Business & Commerce	10.07%	9.30%	8.06%	8.77%	Business & Commerce	6.00%	7.51%	7.93%	10.22%
Education	10.79%	8.38%	5.50%	5.13%	Education	8.00%	9.95%	6.43%	4.34%
Engineering & Technology	3.60%	5.77%	5.81%	6.11%	Engineering & Technology	2.00%	5.66%	6.85%	7.14%
Generic Pathway	11.51%	15.26%	11.20%	12.41%	Generic Pathway	24.67%	19.00%	13.07%	11.27%
Health Sciences	15.11%	23.06%	28.85%	28.07%	Health Sciences	28.00%	23.48%	25.24%	25.68%
Law	4.32%	3.63%	4.43%	5.91%	Law	0.67%	3.57%	4.36%	6.16%
Natural Sciences	7.91%	7.80%	10.78%	9.94%	Natural Sciences	6.00%	7.29%	10.46%	10.08%
Social & Behavioural	12.95%	8.33%	8.29%	8.45%	Social & Behavioural	6.67%	7.15%	8.25%	6.86%

Figure 22. Heat maps showing hot broad areas between school ICSEA quartiles.

4.5 Applicants' top preferences

In the above section, all applications were analysed at one unitary level. That is, the applications were not weighted based on the applicants' stated preference level.

For this section, findings regarding applicants' top two preferred study areas are presented (Figure 23). It should be noted, however, that not all applicants submitted more than one application and, hence, have more than one preference. Data on the second preference in Figure 23 represent only applicants with more than one application.

Applicants' preferences were not analysed based on their geographical region, school sector, or school ICSEA. Only the overall picture is presented here.

As demonstrated in Figure 23, for both application years, Generic Pathway is the most obvious first preference across all applicants.

However, in terms of the second preference, there are more study areas that showed up as being popular (coloured in dark red). Health, Science, Education, and Nursing appeared to be a common second preference in both application years. Generic Pathway program showed up as one of the common second preferences in 2018 only.

2017			2018		
	1st	2nd		1st	2nd
ARCHI	1.55%	1.07%	ARCHI	1.79%	2.15%
CREVA	7.38%	7.30%	CREVA	8.47%	5.97%
GENART	8.96%	7.60%	GENART	9.12%	7.64%
HUMAN	0.21%	0.46%	HUMAN	0.15%	0.48%
BUSI	7.23%	5.87%	BUSI	6.31%	5.92%
ECON	1.10%	2.55%	ECON	2.53%	2.91%
ED	7.05%	9.85%	ED	9.27%	9.46%
ENG/AMC	3.15%	4.69%	ENG/AMC	4.36%	4.16%
ICT	2.20%	3.47%	ICT	2.63%	2.15%
GENPATH	22.08%	1.53%	GENPATH	17.68%	8.27%
MED	2.50%	2.60%	MED	2.19%	2.91%
NURSING	5.98%	8.67%	NURSING	6.86%	9.79%
PARAMED	1.46%	2.91%	PARAMED	1.27%	2.34%
PHARM	0.77%	1.48%	PHARM	2.50%	2.53%
HEALTH	9.26%	13.78%	HEALTH	8.38%	10.61%
LAW	4.05%	6.07%	LAW	4.54%	5.49%
AGRI/AQUA	1.25%	0.97%	AGRI/AQUA	1.24%	0.96%
SCIENCE	7.44%	9.95%	SCIENCE	5.84%	9.56%
PSYC	4.38%	5.51%	PSYC	2.53%	3.54%
SOCIALSC	1.99%	3.67%	SOCIALSC	2.32%	3.15%

Figure 23. Heat maps showing applicants' top two preferred sub-study areas.

Looking at the broader level (Figure 24), common first preference in both years include Generic Pathway and the Health Sciences. As a second preference, Health Sciences is again a common choice, followed by the Natural Sciences.

2017			2018		
	1st	2nd		1st	2nd
Architecture, Design & Creative	8.93%	8.37%	Architecture, Design & Creative	10.26%	8.12%
Arts & Humanities	9.17%	8.06%	Arts & Humanities	9.27%	8.12%
Business & Commerce	8.33%	8.42%	Business & Commerce	8.84%	8.84%
Education	7.05%	9.85%	Education	9.27%	9.46%
Engineering & Technology	5.36%	8.16%	Engineering & Technology	6.99%	6.31%
Generic Pathway	22.08%	1.53%	Generic Pathway	17.68%	8.27%
Health Sciences	19.97%	29.44%	Health Sciences	21.21%	28.19%
Law	4.05%	6.07%	Law	4.54%	5.49%
Natural Sciences	8.69%	10.92%	Natural Sciences	7.08%	10.51%
Social & Behavioural	6.37%	9.18%	Social & Behavioural	4.85%	6.69%

Figure 24. Heat maps showing applicants' top two preferred broad study areas.

Section 5: Tasmanian students enrolled at the University of Tasmania

The enrolment data provides a snapshot of who amongst the Tasmanian applicants ended up enrolling and continuing their studies at the University of Tasmania.

Ideally, the analysis could have examined who amongst the applicants were provided an offer to study at the University of Tasmania, which course(s) they were offered, and if they accepted the offer. This set of information was not part of the data for this report, but may be included for future analysis and reporting.

Instead, the analysis used data about students' current enrolment to identify Tasmanian applicants who ultimately chose to enrol at the University of Tasmania.

5.1 Application to enrolment conversion rate

To get a sense of the proportion of applicants who are currently enrolled at the University of Tasmania, applicant-to-enrolment conversion rates were calculated for each Year 12 school. Findings then are presented as averaged across all schools or as averaged between geographical regions, school sectors, or school ICSEA groups.

On average, about three quarters of applicants from each Year 12 school ended up enrolling at the University of Tasmania (*Mean* = 75.6% in 2017 and *Mean* = 75.0% in 2018). There is, however, a large variation in conversion rate between schools with the standard deviation from the mean reaching 20% (*SD* = 22.8 in 2017 and *SD* = 21.9 in 2018). This is mainly due to a large variation in the number of applicants from each school, which ranges between 1 and 374 applicants across both years.

Overall, from 3360 applicants in 2017, 2692 (or 80.1%) are identified to be enrolled at UTAS as of the semester 2 census date. In the following year, from 3235 applicants, 2432 (or 75.2%) are identified to be enrolled at UTAS as of the same date. These findings may indicate that Tasmanian secondary school students are highly likely to enrol at the University of Tasmania when they receive an offer to study at the university.

Conversion rate by geographical region

Comparison between geographical regions in terms of the application-to-enrolment conversion rate shows that the rates are relatively similar between regions, $F_{(2,26)} = .17, p = .84$ in 2017 and $F_{(2,31)} = 1.32, p = .28$. On average, about 70 to 75% of applicants from each school in each region enrolled at the University of Tasmania (see Table 7).

Table 7. Mean Application to Enrolment Conversion Rate by Region

	2017	2018	Averaged across both years
North	71.0% (28.1)	82.0% (15.0)	76.5%
North-West	72.4% (13.1)	65.6% (19.2)	69.0%
South	76.7% (23.8)	73.2% (25.2)	74.9%

Note: Values in brackets are the corresponding standard deviation.

Conversion rate by school sector

The variance in terms of conversion rates between schools is not homogenous across the four school sectors—Government Colleges, Extension Schools, Catholic schools, and Independent schools. This is due to the size of Extension Schools being particularly different from the others. Applicant numbers are small in Extension Schools and, therefore, the conversion rate between schools in that category vary widely (see standard deviation values in Table 8).

Despite the lack of homogeneity in variance, findings indicate that the application-to-enrolment conversion rate between school sectors are not significantly different, $F_{(3,25)} = 2.2, p = .84$ in 2017 and $F_{(3,30)} = 1.1, p = .28$. On average, conversion rates fall around 70%.

Table 8. Mean Application to Enrolment Conversion Rate by School Sector

	2017	2018	Averaged across both years
Government Colleges	81.0% (2.2)	77.5% (3.7)	79.3%
Extension Schools	54.2% (45.9)	81.5% (37.7)	67.8%
Catholic schools	79.7% (4.4)	72.3% (5.1)	76.0%
Independent schools	77.1% (8.6)	73.2% (14.5)	71.2%

Note: Values in brackets are the corresponding standard deviation.

Conversion rate by ICSEA quartile

Differences in conversion rates between schools with different levels of socio-educational advantage (ICSEA) were also examined (Table 9). The variance in conversion rates appeared to be larger in the lower ICSEA quartiles compared to the upper ICSEA quartiles. Nonetheless, findings indicate there is also no significant differences in terms of the application-to-enrolment conversion rate between the ICSEA quartiles, $F_{(3,25)} = .72, p = .55$ in 2017 and $F_{(3,30)} = .46, p = .71$.

Table 9. Mean Application to Enrolment Conversion Rate by ICSEA Quartile

	2017	2018	Averaged across both years
Q1: >0 to 25 th percentile	64.8% (38.1)	70.9% (38.6)	67.8%
Q2: >25 to 50 th percentile	69.0% (30.5)	77.9% (15.1)	73.5%
Q3: >50 to 75 th percentile	79.1% (3.9)	72.3% (18.9)	75.7%
Q4: >75 th percentile	79.6% (5.6)	72.5% (7.6)	76.1%

Note: Values in brackets are the corresponding standard deviation.

5.2 Overview of enrolled applicants

As indicated above, in 2017 there were 2,692 students, and in 2018 2,432 students, enrolled at the University of Tasmania based on the pool of Tasmanian secondary-school student applicants that was analysed. Averaging the number of enrolments between both years, the proportions of male and female students enrolled (left panel in Figure 19) are found to be similar to the proportions of male and female applicants (see Section 4, Figure 12).

Data from both years also demonstrate that a large number of students are enrolled in the College of Arts, Law and Education (CALE) and in the University College which focuses on Pathway programs (right panel in Figure 25). Due to data limitations, it is not possible to determine the specific breakdown of students in each sub-study area (as analysed in Section 4).

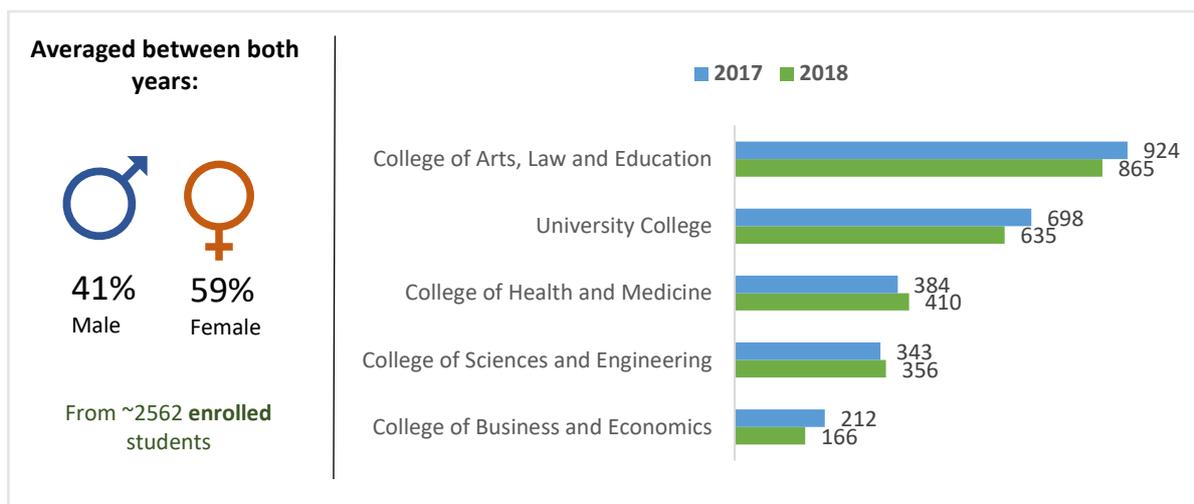


Figure 25. Enrolled Tasmanian secondary school applicants.

5.3 Enrolment by region

Proportions of enrolment between regions were compared to the expected proportions based on the application data (Section 4). Findings indicate that the proportions of student enrolment between regions are similar to the proportions of applicants from those regions, $\chi^2_{(2)} = 2.11, p = .35$ for 2017 and $\chi^2_{(2)} = 1.65, p = .43$ for 2018. Over half of the enrolled students come from Southern Tasmania (57.7% in 2017 and 55.9% in 2018), about a quarter from Northern Tasmania (23.3% in 2017 and 25.9% in 2018), and about a fifth from North-Western Tasmania (19.0% in 2017 and 18.3% in 2018).

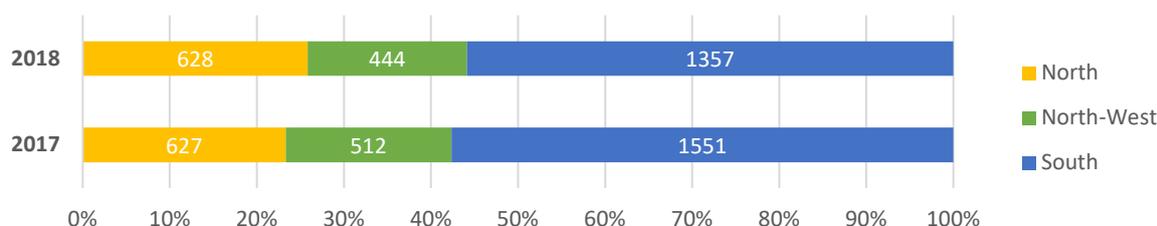


Figure 26. Enrolled students grouped by the Tasmanian region they come from.

Enrolled students were further grouped into several ATAR score brackets to gain a sense of their ATAR achievements. Not surprisingly, there is a trend showing an increasing proportion of enrolled students in the higher ATAR score brackets (Figure 27), which may be due to students with higher ATAR score being more likely to receive an offer to study at the university.

Those that successfully enrolled without an ATAR score made up of less than 9% of the enrolment. The proportion of non-ATAR enrolees appears higher in 2018 than in 2017.

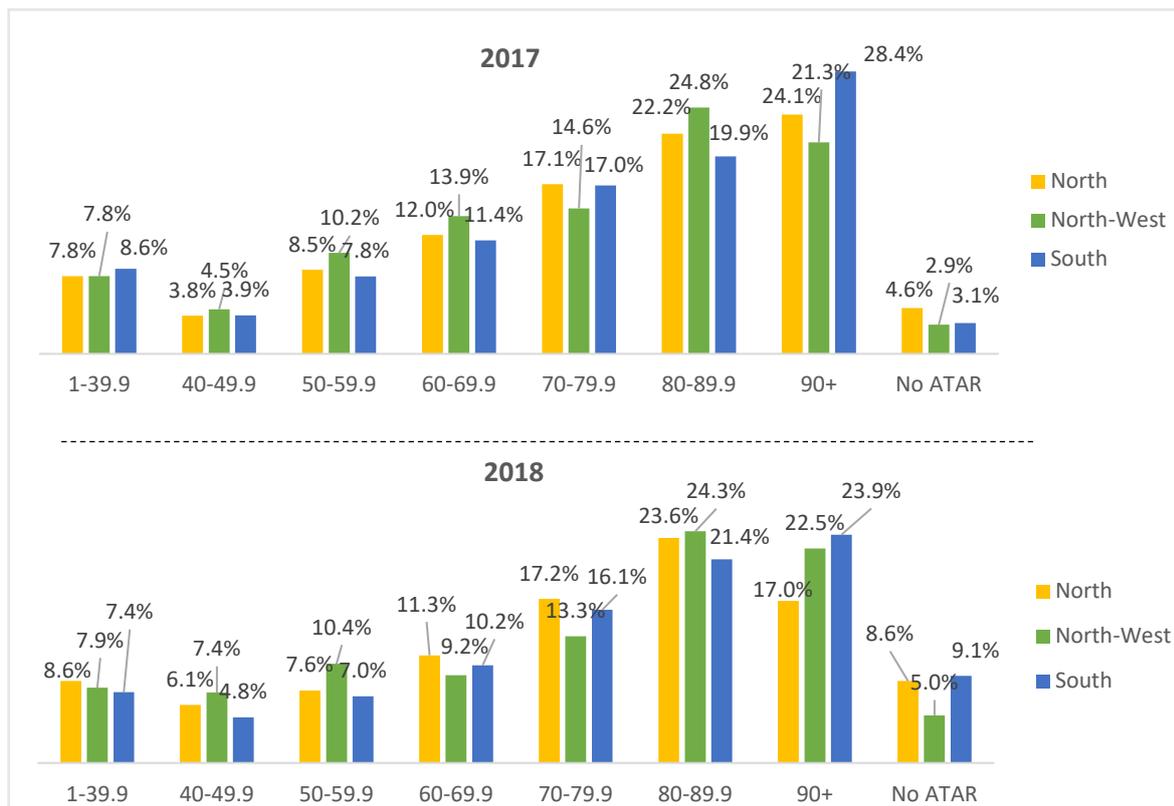


Figure 27. Proportion of enrolled students in each ATAR score bracket by region.

Students' average or mean ATAR score for each region was computed for comparison (Table 10). Only those with an ATAR score are included in the analysis. As such, the total number of students in Table 10 is smaller than the total number of enrolments (Figure 26). Variation in ATAR scores are similar between regions as demonstrated by Figure 27 and as tested statistically using a homogeneity of variance test.

A one-way ANOVA analysis conducted for each enrolment year showed that the results are dissimilar between the two years. In 2017, students' mean ATAR scores are not different between the three Tasmanian regions, $F_{(2,2598)} = .78, p = .46$. However, in 2018, there are some differences between regions, $F_{(2,2226)} = 5.06, p < .01$, with the Northern enrollees showing statistically significantly lower mean ATAR score compared to the Southern enrollees.

Table 10. Enrolled Students' Mean ATAR Score by Region

	Number of ATAR students (2017)	2017	Number of ATAR students (2018)	2018
North	599	72.8 (24.1)	574	69.1 (25.4)
North-West	497	71.8 (23.8)	422	71.2 (24.9)
South	1503	73.4 (24.8)	1233	73.5 (23.5)
Overall	2599	73.0 (24.5)	2229	72.1 (24.3)

Note: Values in brackets are the corresponding standard deviation from the mean.

5.4 Enrolment by school sectors

Enrolment data as compared between school sectors are as expected given the proportion of applicants from each school sector, $\chi^2_{(3)} = .59, p = .90$ for 2017 and $\chi^2_{(3)} = 3.31, p = .34$ for 2018.

Over half of the enrolled students are from Government Colleges (57.7% in 2017 and 55.9% in 2018). Enrolees from Catholic (22.4% in 2017 and 22.6% in 2018) and Independent (21.0% in 2017 and 18.3% in 2018) schools make up of about a fifth of the enrolment each. Finally, enrolees from Extension Schools make up of 3% of the enrolment in 2017 and 5% of the enrolment in 2018.

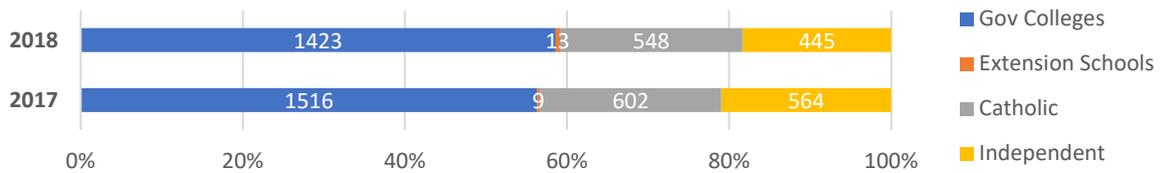


Figure 28. Enrolled students grouped by their Year 12 school sector.

The distributions of students according to several ATAR score brackets demonstrate that students from Extension Schools (orange bar in Figure 29) tend to concentrate in the lower end of the ATAR score brackets. For other school sectors, there tends to be more students as the ATAR score bracket increases.

Interestingly, there are no enrolees from Extension Schools who do not have an ATAR score. This may be because enrolment without an ATAR is challenging when students' ATAR score is low.

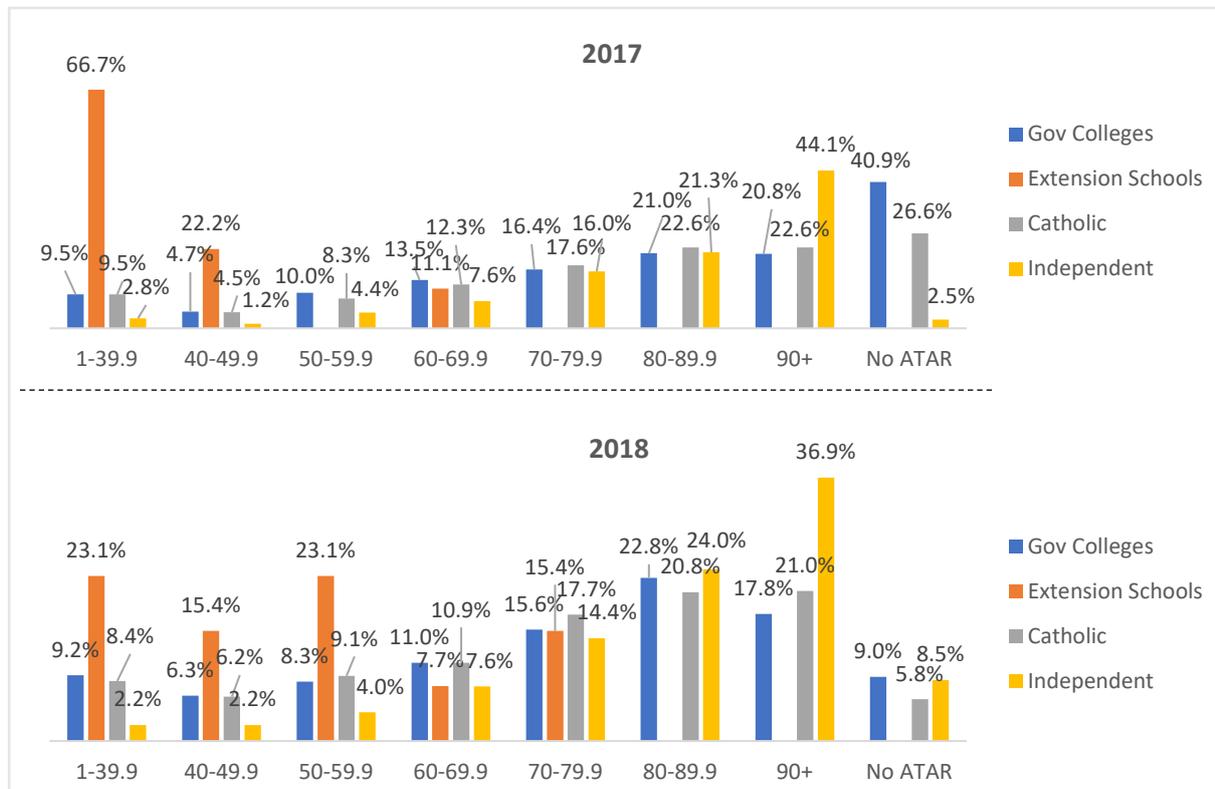


Figure 29. Proportion of enrolled students in each ATAR score bracket by school sector.

As in the earlier section, students' mean ATAR scores were also compared between school sectors. As expected, the variance in students' ATAR scores is not homogenous across all school sectors. Regardless, one-way ANOVA analyses performed on data from each enrolment year (see Table 11) indicate that students' mean ATAR scores are significantly different between the school sectors, $F_{(3,2598)} = 54.3, p < .001$ in 2017 and $F_{(3,2225)} = 34.7, p < .001$ in 2018.

Accounting for the non-homogenous variance between comparison groups, Games-Howells post hoc tests were conducted to examine where the differences are observed. Results of the tests parallel findings in Section 2.2, where mean ATAR scores collected by the state were compared between school sectors. Specifically, the post-hoc tests indicate that the mean ATAR score of enrolees from Extension Schools are significantly lower than the other school sectors, and the mean ATAR score of enrolees from Independent schools are significantly higher than the other schools. In contrast, the mean ATAR score of enrolees from Government Colleges and Catholic schools are not significantly different from each other.

Table 11. Enrolled Students' Mean ATAR Score by School Sector

	Number of ATAR students (2017)	2017	Number of ATAR students (2018)	2018
Government Colleges	1454	70.3 (25.1)	1295	69.7 (25.4)
Extension Schools	9	17.7 (25.8)	11	42.0 (28.3)
Catholic	586	71.3 (24.8)	516	71.9 (23.9)
Independent	550	82.7 (18.1)	407	82.1 (17.1)
Overall	2599	73.0 (24.5)	2229	72.1 (24.3)

Note: Values in brackets are the corresponding standard deviation from the mean.

4.5 Enrolment by school ICSEA quartile

When the enrolment data were compared between schools with different levels of socio-educational advantage (broken into four ICSEA quartiles, see Figure 24), the results indicate that there are no systematic differences in terms of enrolment between the ICSEA levels, $\chi^2_{(3)} = .02, p = .90$ for 2017 and $\chi^2_{(3)} = .01, p = .98$ for 2018. The proportions of enrolees between ICSEA levels are as expected given the proportions of applicants from each of those categories (see Section 4.3).

About 40% of enrolees are from schools with ICSEA in the 51st to 75th percentiles (40.3% in 2017 and 41.9% in 2018), followed by about 35% from schools with ICSEA in 26th to 50th percentiles (35.3% in 2017 and 36.1% in 2018). Enrolees from schools with the highest socio-educational advantage make up about a fifth of the enrolment (22.0% in 2017 and 19.3% in 2018) and enrolees from schools with the least socio-educational advantage make up about 2% of the enrolment (2.3% in 2017 and 2.7% in 2018).



Figure 30. Enrolled students grouped by their Year 12 school ICSEA quartile.

The breakdown of enrolled students' ATAR scores shows that there is a trend for students with higher ATAR achievements to be from schools with higher socio-educational advantage or ICSEA level, and students with lower ATAR achievements to be from schools with lower ICSEA (see Figure 31). This observation is supported by the mean comparison performed next.

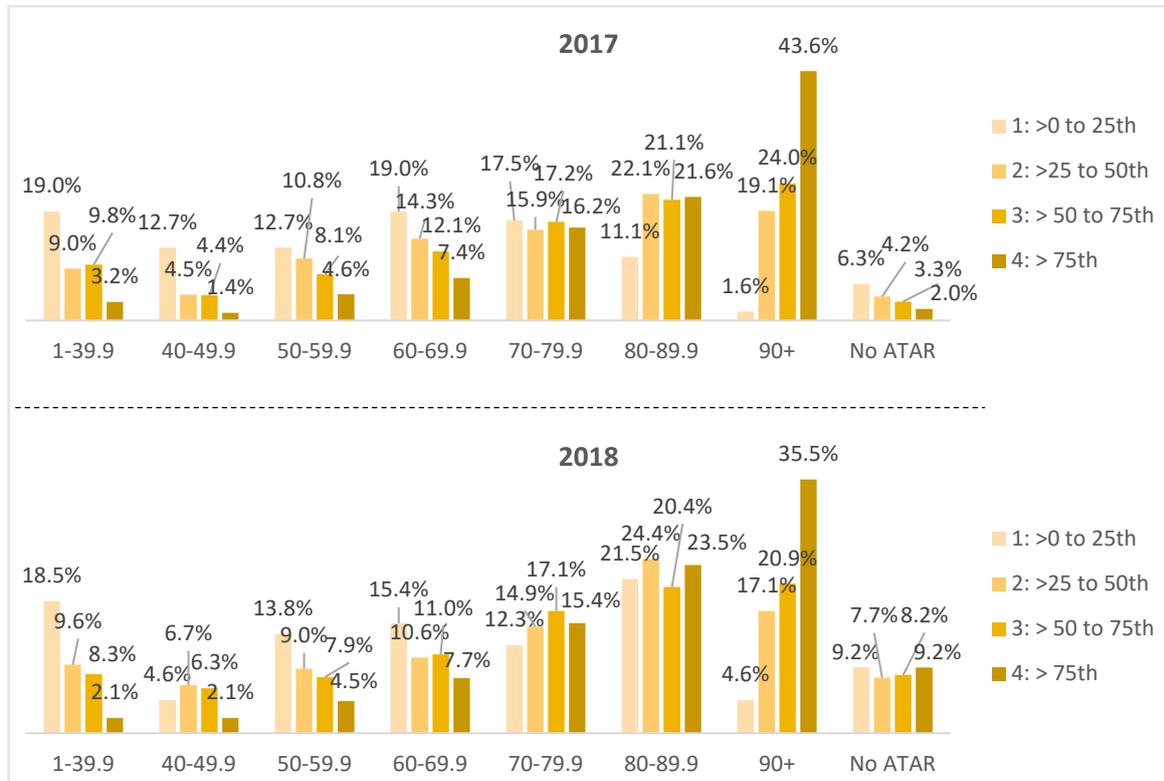


Figure 31. Proportion of enrolled students in each ATAR score bracket by school ICSEA quartile.

One-way ANOVA analyses performed on data from each enrolment year showed that there are significant differences in students' mean ATAR scores between schools with different levels of socio-educational advantage (ICSEA), $F_{(3,2595)} = 47.75, p < .001$ for 2017 and $F_{(3,2225)} = 35.6, p < .001$ for 2018.

To follow up on the differences (see Table 12), Games-Howells post hoc tests were performed. This test was selected due to variance in ATAR scores being non-homogenous between the ICSEA quartiles. Findings for both years indicate that only the two extreme groups have significantly different mean ATAR scores: enrolees from schools with the lowest ICSEA bracket have lower mean ATAR scores compared to enrolees from schools with the highest ICSEA bracket. No significant differences are found between Quartile 2 and 3.

Table 12. Enrolled Students' Mean ATAR Score by School ICSEA Quartile

	Number of ATAR students (2017)	2017	Number of ATAR students (2018)	2018
Q1: >0 to 25 th percentile	59	53.8 (26.9)	59	58.4 (28.7)
Q2: >25 to 50 th percentile	911	70.3 (24.4)	810	69.0 (25.9)
Q3: >50 to 75 th percentile	1049	71.20 (25.6)	935	71.3 (24.2)
Q4: >75 th percentile	580	82.2 (18.7)	425	81.9 (16.5)
Overall	2599	73.0 (24.5)	2229	72.1 (24.3)

Note: Values in brackets are the corresponding standard deviation from the mean.

Section 6: Next steps

This interim report has provided an overview of findings from Phase Three of the research: analysing quantitative data from TASC and the University of Tasmania. As a bonus, this was supplemented with an analysis of booklets for the 2018 and 2019 TASC high achiever awards.

Insights from this report add to the Phase One interim report (delivered in December 2019) which reported on findings from focus groups with key informants in five schools. That report informed the development of a student survey to be provided to students across a larger number of schools (Phase two). Implementation of the survey has been delayed due to COVID-19, with research in schools not permitted in Term 2, 2020. The possibility to collect survey data will be negotiated with the Department of Education, the Tasmanian Catholic Education Commission, and schools. It is likely to occur in the latter part of 2020, or early in 2021. As a result, Phase Four (individual student interviews) will also be delayed, as Phase Four is informed by Phase Two findings.

The various data sources complement and triangulate each other, leading to thorough insights into the reasons why Tasmanian school students intend to pursue particular post-school pathways.

These insights are valuable not only for the University of Tasmania to fulfil its aim of enabling more Tasmanian students to access university pathways, but also for informing education policy, careers advice, and communication about post-school pathways for young Tasmanians more broadly.

References

- ACARA, Australian Curriculum, Assessment, and Reporting Authority. (2013). *Guide to understanding 2013 Index of Community Socio-educational Advantage (ICSEA) values*. Retrieved from https://docs.acara.edu.au/resources/Guide_to_understanding_2013_ICSEA_values.pdf
- TASC, Office of Tasmanian Assessment, Standards, and Certification. (2019). *Understanding the ATAR: Calculating the Australian Tertiary Admissions Rank (ATAR) for senior secondary students in Tasmania*. Retrieved from <https://www.tasc.tas.gov.au/wp-content/uploads/2019/09/Understanding-the-ATAR.pdf>
- TASCa, Office of Tasmanian Assessment, Standards, and Certification. (n.d). 2018 Tasmanian Certificate of Education (TCE) Attainment. Retrieved from <https://www.tasc.tas.gov.au/wp-content/uploads/2017/07/Tasmanian-Certificate-of-Education-Attainment-2014-2018.pdf>
- TASCb, Office of Tasmanian Assessment, Standards, and Certification. (n.d). *2014-2018 Tasmanian direct continuation data*. Retrieved from <https://www.tasc.tas.gov.au/wp-content/uploads/2019/07/State-and-sector-level-Direct-Continuation-2014-2018.pdf>

Appendix

Architecture, Design & Creative Arts	
Architecture	Bachelor of Architecture and Built Environments (also with Creative Innovators Program) Bachelor of Environmental Design (with or without Honours)
Creative Arts	Associate Degree in Applied Design Associate Degree in Furniture Design Associate Degree in Music Studies Bachelor of Arts and Bachelor of Fine Arts (with or without Honours) Bachelor of Contemporary Arts (with or without Honours) Bachelor of Fine Arts (with or without Honours) Bachelor of Media (with or without Honours) Bachelor of Music (with or without Honours) Bachelor of Music (Elite) with Honours Bachelor of Musical Arts Bachelor of Visual Communication Diploma of Applied Design Diploma of Fine Arts and Design
Arts & Humanities	
General Arts	Associate Degree in Arts Bachelor of Arts (with or without Honours) Bachelor of General Studies (Arts Pathway)
Humanities	Diploma of Family History Diploma of International Studies Diploma of Languages
Business & Commerce	
Business	Associate Degree in Applied Business (with or without Specialisation) Bachelor of Arts and Bachelor of Business (with or without Honours) Bachelor of Business Bachelor of Business (Maritime and Logistics Management- with or without Honours) Bachelor of Business Administration Bachelor of Business Administration (Hospitality Management) Bachelor of Business Administration (Tourism Management) Bachelor of Business with Honours Bachelor of General Studies (Business Pathway) Bachelor of International Logistics (Freight Forwarding) Diploma of Applied Business
Economics	Bachelor of Arts and Bachelor of Economics Bachelor of Business and Bachelor of Economics (with or without Honours) Bachelor of Economics (with or without Honours) Bachelor of Economics and Bachelor of Information and Communication Technology Bachelor of Economics and Bachelor of Laws (with or without Honours in Law) Bachelor of Economics and Bachelor of Science (with or without Honours)
Education	
Education	Associate Degree (Education Support) Bachelor of Adult and Applied Learning Bachelor of Education (Applied Learning)

	<p>Bachelor of Education (Early Childhood- with or without Honours)</p> <p>Bachelor of Education (Health and Physical Education)</p> <p>Bachelor of Education (Primary- with or without Honours)</p> <p>Bachelor of Education (Science and Mathematics)</p> <p>Bachelor of Education (with or without Honours)</p> <p>Bachelor of Educational Studies</p> <p>Bachelor of General Studies (Education Pathway)</p> <p>Diploma of Education Support</p>
Engineering & Technology	
Engineering and Australian Maritime studies	<p>Associate Degree in Engineering (Civil/ Electrical/ Maritime/ Mechanical/ Ocean Engineering)</p> <p>Associate Degree in Maritime and Logistics Management</p> <p>Bachelor of Applied Science (Marine Electrical Engineering/ Marine Engineering/ Marine Environment – Honours or non-Honours/ Maritime Technology Management – Honours or non-Honours/ Nautical Science)</p> <p>Bachelor of Engineering (Honours)</p> <p>Bachelor of Engineering (Marine & Offshore Engineering - Co-operative Education/ Honours)</p> <p>Bachelor of Engineering (Naval Architecture - Co-operative Education/ Honours/ Honours ECU)</p> <p>Bachelor of Engineering (Ocean Engineering - Co-operative Education/ Honours/ Honours ECU/ Honours AUT)</p> <p>Bachelor of Engineering (Specialisation) with Honours– ECU/ AUT/ Flinders/ Cooperative Education)</p> <p>Bachelor of General Studies (Engineering Pathway)</p> <p>Bachelor of Global Logistics and Maritime Management (with or without Honours)</p> <p>Bachelor of Science and Bachelor of Engineering (Honours)</p> <p>Bachelor of Science and Bachelor of Engineering (Specialisation) with Honours</p> <p>Diploma of Maritime and Logistics Management</p>
Information and Computer Technology	<p>Associate Degree in Applied Technologies</p> <p>Bachelor of Arts and Bachelor of Information and Communication Technology</p> <p>Bachelor of Business and Bachelor of ICT</p> <p>Bachelor of General Studies (ICT Pathway)</p> <p>Bachelor of Information and Communication Technology (with or without Honours)</p> <p>Bachelor of Information and Communication Technology and Bachelor of Laws (with or without Honours)</p> <p>Bachelor of Information and Communication Technology and Bachelor of Science</p> <p>Bachelor of Information and Communication Technology and Bachelor of Visual Comm</p>
Generic Pathway	
Generic pathway	<p>Diploma of General Studies</p> <p>Diploma of University Studies</p> <p>Murina (Aboriginal Enabling) Program</p> <p>University Preparation Program</p>
Health Sciences	
Medicine	<p>Bachelor of Laboratory Medicine</p> <p>Bachelor of Medicine and Bachelor of Surgery</p>
Nursing	<p>Bachelor of Nursing (with or without Honours)</p> <p>Bachelor of Nursing (Enrolled Nurse Pathway)</p>

	<p>Bachelor of Nursing (Fast Track- Hobart/ Rozelle/ St Vincent's)</p> <p>Bachelor of Nursing with Clinical Honours (Leadership in Practice/ Transition to Practice)</p>
Paramedicine	Bachelor of Paramedic Practice (with or without Honours)
Pharmacy	<p>Bachelor of Pharmacy (with or without Honours)</p> <p>Bachelor of Pharmacy with Applied Honours</p>
Health	<p>Associate Degree in Dementia Care</p> <p>Associate Degree in Health and Community Care</p> <p>Bachelor of Biomedical Science (with or without Honours)</p> <p>Bachelor of Biotechnology</p> <p>Bachelor of Biotechnology and Medical Research (with or without Honours)</p> <p>Bachelor of Dementia Care</p> <p>Bachelor of Exercise Science</p> <p>Bachelor of General Studies (Health Pathway/ Health Science/ Pathway/ Health)</p> <p>Bachelor of Health</p> <p>Bachelor of Health and Community Care</p> <p>Bachelor of Health Science (with or without Honours)</p> <p>Bachelor of Health Science (Environmental Health/ Exercise Science/ Medical Radiation Science/ Nutrition)</p> <p>Bachelor of Health Science/Medical Radiation Science</p> <p>Bachelor of Medical Research (with or without Honours)</p> <p>Bachelor of Medical Science (with or without Honours)</p> <p>Diploma of Dementia Care</p> <p>Diploma of University Studies (Health Science)</p>
Law	
Law	<p>Bachelor of Arts and Bachelor of Laws</p> <p>Bachelor of Arts and Bachelor of Laws with Honours in Law</p> <p>Bachelor of Business and Bachelor of Laws</p> <p>Bachelor of Business and Bachelor of Laws with Honours in Law</p> <p>Bachelor of Laws (with or without Honours)</p> <p>Bachelor of Laws (Direct Entry-with or without Honours/ Standard Entry)</p> <p>Bachelor of Legal Studies (with or without Honours)</p> <p>Bachelor of Science and Bachelor of Laws</p> <p>Bachelor of Science and Bachelor of Laws with Honours in Law</p>
Natural Sciences	
Agriculture	<p>Associate Degree in Agribusiness</p> <p>Associate Degree in Aquaculture</p> <p>Bachelor of Agricultural Science (with or without Honours)</p> <p>Bachelor of Agricultural (with or without Honours)</p> <p>Bachelor of Applied Science (Agriculture and Business)</p> <p>Diploma in Horticultural Business</p>
Science	<p>Associate Degree in Applied Science</p> <p>Associate Degree in Applied Science (Marine Environment)</p> <p>Associate Degree in Science</p> <p>Bachelor of Animal Science</p> <p>Bachelor of Antarctic Science (Honours)</p> <p>Bachelor of Applied Science (Environmental Science)</p> <p>Bachelor of Arts and Bachelor of Science (with or without Honours)</p> <p>Bachelor of Business and Bachelor of Science (with or without Honours)</p> <p>Bachelor of Environmental Science with Honours</p> <p>Bachelor of General Studies (Science Engineering and Technology)</p>

	<p>Bachelor of General Studies (Science Pathway)</p> <p>Bachelor of Marine and Antarctic Science (with or without Honours)</p> <p>Bachelor of Marine and Antarctic Science with Honours (Specialisation)</p> <p>Bachelor of Marine Science with Honours</p> <p>Bachelor of Natural Environment and Wilderness Studies (with or without Honours)</p> <p>Bachelor of Science (with or without Honours)</p> <p>Bachelor of Science (Catalyst Program - with or without Honours)</p> <p>Diploma of Applied Science</p> <p>Diploma of Sustainable Living</p> <p>Bachelor of Surveying and Spatial Sciences (with or without Honours)</p>
Social and Behavioural Sciences	
Psychology	<p>Bachelor of Psychological Science (with or without Honours)</p> <p>Bachelor of Psychological Science and Bachelor of Laws</p> <p>Bachelor of Psychology with Honours</p> <p>Bachelor of Behavioural Science (with or without Honours)</p> <p>Bachelor of Behavioural Science and Bachelor of Laws</p>
Social Science	<p>Bachelor of Justice Studies (with or without Honours)</p> <p>Bachelor of Social Science (with or without Honours)</p> <p>Bachelor of Social Science (Police Studies)</p> <p>Bachelor of Social Work (with or without Honours)</p> <p>Diploma of Public Policy</p>



Peter Underwood Centre

A partnership between the University of Tasmania and the Tasmanian State Government
in association with the Office of the Governor of Tasmania.