Choosing VET: enabling conditions to VET pathways

Hywel Ellis, Professor Jenny Gore, Professor Max Smith, Professor Kathryn Holmes, Dr Adam Lloyd, and Andrew Lyell

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Background

- Australian tertiary education sector characterised by churn
- TAFE enrolments decreasing and turmoil in the RTO sector
- Traditional distinction between VET (for hands-on jobs) and university (theory-based jobs) changing
- VET courses shifting from 50:50 theory and practical toward 80:20 in favour of theory – parallels the transition from the Industrial to the Information Age
- Skills shortages predicted in vocational occupations

In this context, drawing on data from the recent Aspirations Longitudinal Study, understanding who is choosing VET pathways and why is increasingly important. Here we consider the question of who is choosing VET pathways?
Methodology

QUANTITATIVE COMPONENT
Students, parents and teachers in selected schools across 3 regions

Students: NAPLAN, survey
Teachers and parents: survey

Y3    Y5    Y7    Y9

Follow up interviews and focus groups – attrition addressed by panelling the sample

QUALITATIVE COMPONENT
Students, parents and teachers in selected schools across 3 regions

School and Government policy review and ABS data

Interviews and focus groups: students, teachers and parents

Maintain and panel sample as required

Develop principles for interventions

2012

2013

2014

2015

Students: survey
Teachers and parents: survey

Students: NAPLAN-HSC trial, survey
Teachers and parents: survey

Students: survey
Teachers and parents: survey

Students: NAPLAN, survey
Teachers and parents: survey
Aspirations Longitudinal Study - Sample

2012 – 2015 surveys completed
n = 10,543 students
1,362 parents
1,341 teachers
64 schools of all types

2013 and 2014 focus group data
200 focus groups in 30 schools
567 students
59 parents and carers
152 teachers and principals
The Australian and New Zealand Standard Classification of Occupations (ANZSCO) is used to code the students’ indicated job choices. Syntax from ACER converts these codes into an occupational prestige scale from 0 to 100 based on the Australian Socioeconomic Index 2006 (AUSEI06).

The relationship between occupational prestige and educational level generally held by people working in this range is represented in the table below – see ABS for detail.

### Occupational and educational aspiration measures

- The Australian and New Zealand Standard Classification of Occupations (ANZSCO) is used to code the students’ indicated job choices. Syntax from ACER converts these codes into an occupational prestige scale from 0 to 100 based on the Australian Socioeconomic Index 2006 (AUSEI06).
- The relationship between occupational prestige and educational level generally held by people working in this range is represented in the table below – see ABS for detail.

<table>
<thead>
<tr>
<th>Occupational prestige (AUSEI06)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>0 to 34.9</td>
</tr>
<tr>
<td>35 to 60</td>
</tr>
<tr>
<td>63.6 to 100</td>
</tr>
<tr>
<td>Occupations across this range</td>
</tr>
<tr>
<td>Livestock worker 4.9</td>
</tr>
<tr>
<td>Cook 17.7</td>
</tr>
<tr>
<td>Aged &amp; disabled carer 34.9</td>
</tr>
<tr>
<td>Veterinary nurse 37.0</td>
</tr>
<tr>
<td>Beauty therapist 49.6</td>
</tr>
<tr>
<td>Welfare support 58.9</td>
</tr>
<tr>
<td>Librarian 81.3</td>
</tr>
<tr>
<td>Teacher 85.3</td>
</tr>
<tr>
<td>Surgeon 100.0</td>
</tr>
<tr>
<td>Associated education &amp; ANZSCO skill level</td>
</tr>
<tr>
<td>High School/Cert 1 Skill level 5</td>
</tr>
<tr>
<td>TAFE/VET Cert Skill level 2-4</td>
</tr>
<tr>
<td>University Skill level 1</td>
</tr>
</tbody>
</table>
Variables

The analysis is anchored in the survey responses and other linked data for these students, considering variables such as:

- Prior achievement – NAPLAN results from 2012 or 2014, quartiles
- Socioeconomic status, quartiles
- Sex (M/F)
- Aboriginal status (Indigenous/non-Indigenous)
- Students’ level of schooling (primary, lower secondary, upper secondary [Ys10-12])
- Geographic location – metropolitan/provincial
- Barriers to educational/career pathways (financial and travel barriers), count from 0-4
- Enabling conditions for educational/career pathways (cultural capital), quartiles
- Occupation prestige, a scale of 0-100
ANZSCO skill levels

Skill level 1 Bachelor Degree or higher qualification

Skill level 2 Associate Degree, Advanced Diploma or Diploma

Skill level 3 AQF Certificate IV or AQF Certificate III

Skill level 4 AQF Certificate II or III

Skill level 5 AQF Certificate I or compulsory secondary education
## Classification of outcome variable

<table>
<thead>
<tr>
<th>Skill level 1</th>
<th>University Pathway to chosen career(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill level 2</td>
<td></td>
</tr>
<tr>
<td>Skill level 3</td>
<td>TAFE/VET pathway to chosen career(s)</td>
</tr>
<tr>
<td>Skill level 4</td>
<td></td>
</tr>
</tbody>
</table>

(Skill level 5 AQF Certificate I or compulsory secondary education)
Career choice and associated skill/education level

The whole sample here is from the total number of jobs identified by students, repeated measures are not accounted for in this analysis.

<table>
<thead>
<tr>
<th>Skill Level</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole sample</td>
<td>13488</td>
</tr>
<tr>
<td>University</td>
<td>8007</td>
</tr>
<tr>
<td>TAFE/VET</td>
<td>5081</td>
</tr>
<tr>
<td>Skill level 5</td>
<td>400</td>
</tr>
</tbody>
</table>
Chi-square Automatic Interaction Detector (CHAID)

Using decision trees to understand how University and VET pathways can be segmented into clusters to assist understanding

Analysis 1 – All students
Dependent variable: University or VET education pathway
Independent variables: Aboriginal status, Geographic location, Primary/lower secondary/upper secondary, NAPLAN quartiles, SES quartiles, Sex

Analysis 2 – Secondary students only
Dependent variable: University or VET education pathway
Independent variable: Travel and Financial Barriers and Cultural capital
CHAID Analysis 1 – all students & demographics

**NAPLAN**

- **Q1**: 58%
- **Q2**: 46%
- **Q3**: 36%
- **Q4**: 24%

**Sex**

- **F**: 46%
- **M**: 69%

**SES**

- **Q1**: 75%
- **Q2&3**: 67%
- **Q4**: 51%

- **Q1&2**: 38%
- **Q3&4**: 31%

- **Q1**: 33%
- **Q2&3**: 27%
- **Q4**: 21%

- **Q1,2&3**: 48%
- **Q4**: 38%

- **Primary**: 32%
- **Secondary**: 26%

- **Metro**: 17%
- **Provincial**: 21%
95% CI indicated job AUSE06 prestige score vs. Year level

NAPLAN quartiles
- Quartile 1
- Quartile 2
- Quartile 3
- Quartile 4
Listen to classical music
Talk about music
Go to art galleries or museums
Go to the theatre to see a play, dance or opera performance
Go to the cinema to watch a movie
Go to a library
Talk about books
Play a musical instrument or sing
Participate in dancing, gymnastics or yoga
Talk about art

I would have to travel too much to study at TAFE or university
I would have to move away from home to study at TAFE or university
There is no appropriate public transport or other way of getting to TAFE/UNI
Public transport would be unaffordable
There would be too much financial pressure on my family
I will need to qualify for Youth Allowance to support my study
CHAID Analysis 2 – Secondary students

Cultural capital

- Listen to classical music
- Talk about music
- Go to art galleries or museums
- Go to the theatre to see a play, dance or opera performance
- Go to the cinema to watch a movie
- Go to a library
- Talk about books
- Play a musical instrument or sing
- Participate in dancing, gymnastics or yoga
- Talk about art

No statistically significant effects

Barriers

- I would have to travel too much to study at TAFE or university
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- Public transport would be unaffordable
- There would be too much financial pressure on my family
- I will need to qualify for Youth Allowance to support my study
Factors

Analysis of these variables for factors that influence students’ career/educational pathway showed that they clustered, at various levels, to provide helpful information about the pathways students are considering for their educational and career futures:

- Prior achievement – NAPLAN results from 2012 or 2014, quartiles
- Socioeconomic status, quartiles
- Sex (M/F)
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- Geographic location – metropolitan/provincial
THANK YOU
Questions and discussion

Connect with us!

w: www.newcastle.edu.au/aspirations
e: aspirations@newcastle.edu.au
Find us on social media at uonAspirations

Notes.
1. The analysis presented here is preliminary and draws on a subset of data from the Aspirations Longitudinal Study. Analysis of repeated measures was not conducted on the dataset used in this presentation but has been undertaken elsewhere (Gore et al., 2015).
2. Funding for the Aspirations Longitudinal Study was provided by the Australian Research Council, the NSW DEC, and the University of Newcastle. The views expressed in this presentation may not be representative of those of the funding bodies.
3. Funding and support for this analysis was provided by the Australian Government Department of Education and Training through the National VET Research program managed by the National Centre for Vocational Education Research. The views and opinions are those of the project team and do not necessarily reflect the views of the Australian or state/territory governments or the funding bodies.
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