Workforce skills development and engagement in training through skill sets: support document

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This document was produced by the authors based on their research for the report Workforce skills development and engagement in training through skill sets, and is an added resource for further information. The report is available on NCVER’s website: <http://www.ncver.edu.au>.

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Introduction

The research study \textit{Workforce skills development and engagement in training through skill sets} aims to test claims about the impact of skill sets delivery on individuals’ engagement in formal training and workforce productivity. Data collections required to provide such information at a national level are yet to be implemented, even though skill sets have emerged as an increasingly important component of a flexible responsive Australian vocational education and training (VET) system. There is a lack of hard research evidence of the benefits of skill sets, especially from the student perspective. To fill this research gap, this study focuses on skill sets developed by TAFE NSW to support the Agrifood sector and provides an early understanding of the contribution that skill sets make to workforce skills development from the student viewpoint. The context for the study, including the origins of skill sets, the types of skill sets that have emerged and the rationales advanced for training through skill sets, has been documented in the Occasional Paper that precedes this report (Mills et al 2011).

This part of the study aims to determine what role skill sets play in:

- developing workforce skills and productivity in Agrifood industries;
- encouraging the engagement of Agrifood workers/new entrants into formal VET;
- encouraging the completion of higher level Agrifood VET qualifications including as building blocks to these qualifications; and
- meeting Agrifood industry needs for post initial qualification skills development.

To make these determinations, the study has examined relevant cohorts of TAFE NSW students from both a quantitative and qualitative perspective:

- Firstly, an analysis of TAFE NSW Agrifood students’ training histories has been undertaken. This analysis has focused on students who enrolled in skill sets within the Rural Production Studies Statement of Attainment (SOA) in 2005 and students who enrolled in the Diploma in Agriculture between 2004 and 2011. For these students the following workforce skills acquisition pathways have been examined, via quantitative analysis of data extracted from the TAFE NSW Student Course Information System (SCIS):
  - A skill set as the first engagement with formal VET in TAFE NSW
  - Skill sets as the only engagement with the formal TAFE NSW VET system
  - Skill sets completion as a stepping stone to completing a qualification(s)
  - Skill sets completion as a further training option after completing a qualification(s)
- Secondly, in-depth structured interviews have been conducted with subsets of the TAFE NSW students for whom training histories had been analysed, to collect detailed qualitative information on reasons for undertaking training via skill sets, the benefits of doing so, and the outcomes of such training.

This document presents these analyses, structured as follows:

- Student training histories, data interrogation methodology and findings
- Student views on skills acquisition pathways, sample selection, interview methodology and findings
- Concluding remarks, drawing on the collective findings as they relate to the study research questions.
Student training histories

The analysis of TAFE NSW Agrifood students’ training histories was conducted between November 2011 and February 2012.

This section outlines:

- the analysis methodology and findings relating to the skills development pathways used over time by students who completed the Statement of Attainment in Rural Production Studies in 2005;
- the analysis methodology and findings relating to skills development pathways over time of students who enrolled in the Diploma in Agriculture between 2004 and 2011;
- the limitations of the analyses; and
- how the outcomes of the analyses informed the following student interview stage of the study.

Definitions

For the purpose of this study skill sets include both Statements of Attainment and Accredited Courses In.

A Statement of Attainment (SOA) is a group of one or more nationally accredited Training Package Units of Competency, but less than a full qualification.

An Accredited Course In (CRS IN) is a short course which includes NSW state accredited units of competency or a combination of state and nationally accredited units of competency less than those required for a qualification. Examples of CRS IN completed in the training histories of the students in this research include the course in SmartTrain Chemical Application, the course in Sustainable Native Forests and the course in Holistic Management.

Students in Rural Production Studies Skill Sets in 2005

This analysis focused on students who enrolled in skill sets within the Rural Production Studies Statement of Attainment, (TAFE NSW Course number 946) in 2005, and specifically examined their skills development pathways both prior to and after completion of the SOA. The structure and purpose of Rural Production Studies SOA 946 are outlined briefly below, along with a discussion of the methodology applied in the analysis of data, the key findings on students’ training pathways to and from the SOA and on the types of skill sets undertaken in the SOA.

Background

The SOA in Rural Production Studies was first accredited in July 2003. This SOA provides employers, employees, students and TAFE NSW Institutes with the ability to build groupings of units of competency (skill sets) to develop knowledge and skills in specific areas of agriculture. The SOA is intended to assist practising farmers, farm workers, people with a commercial interest in farming and new entrants to agriculture to improve farm productivity and sustainability without the need to enrol in a major award course leading to a qualification.
The SOA in Rural Production Studies contains units of competency mainly from the RTE03 Rural Production Training Package plus some units which support training in the rural production sector from other Training packages as follows:

- FPI99 Forest and Forest Products Industry
- RTD02 Conservation and Land Management
- WRR02 Retail
- RTF03 Amenity Horticulture
- TDT02 Transport and Distribution
- BSB01 Business Services

The completion requirement is the successful completion of at least one unit of competency.

Identifying training pathways

Student enrolments across TAFE NSW in a SOA in Rural Production Studies in 2005 were extracted from the TAFE NSW Student Course Information System (SCIS) as a text file and converted to an Excel spreadsheet by TAFE NSW project staff. A data set of 1128 student records (1098 course complete CC and 30 course not complete) was produced. For each of the individual student records, data was extracted from the student enrolment and completion history reports to produce a complete training history. This training history was configured for analysis using processes both in Microsoft Excel and within a Microsoft Access relational database. A student record table including a set of training history flags was produced and imported into Microsoft Excel where cross tabulation formulae were constructed to produce the analysis results described below. Data checking has been performed at each step of the extraction, re-configuration and analysis process. Detailed processes are described in Appendix A. Key results for this data set are presented in Table 1. Further results examining first experience versus non-first experience students are included in Appendix B, Tables 8 and 9.

Key findings

In total, 1098 students completed a SOA in Rural Production Studies in 2005, out of 1128 who enrolled. The SOA had engaged students in skill sets training from across the age spectrum:

- 21% of students who completed the SOA 2005 were aged 25 years and under;
- 18% were aged between 26 and 35 years;
- 23% were aged 36 - 45 years;
- 21% were aged 46 - 55 years; and
- 17% were over 55 years of age.

An analysis of their forward training histories to 2010 found the following:

- Just over half (56%) of the students who completed the SOA in 2005 did not engage again with TAFE NSW in the period 2005 to 2010.
- 44% of the students who completed a SOA in Rural Production Studies in 2005 engaged in further training with TAFE NSW in the period 2005 to 2010.

1 Training flags were constructed to store information about courses undertaken prior to, concurrent to, or after the course in question, as well as the completion status of the course.
Of these students:

- 232 students enrolled in qualifications - Certificate II, Certificate III, Certificate IV (including Certificate IV in Wool Classing) or Diploma in the years that followed, with an aggregate completion rate of 64%. (refer note)

- 32 of the 232 students enrolled in either a Certificate II, Certificate III, Certificate IV or Diploma qualification in Agriculture in the years that followed, with a completion rate of 69%.

- 67 of the 232 students enrolled in Certificate IV in Wool Classing in the years that followed with a completion rate of 88%. (refer Note below)

- 18 of the 232 students enrolled in Diploma qualifications.

- 274 students enrolled in a SOA course and 117 students enrolled in a CRS IN course in the years that followed. Completion rates for all SOA and CRS IN courses undertaken by students since 2005 exceeded 80%.

An analysis of the pre-2005 training histories of students who completed the SOA in 2005, revealed that:

- For 40% of students, their enrolment in 2005 was their first engagement with the TAFE NSW VET system.

- 20% of students had previously enrolled in a Certificate II to Diploma qualification, half of whom had successfully completed these qualifications.

- Ten percent of students had previously completed a qualification (Certificate II, Certificate III, Certificate IV or Diploma).

- 40% had completed a course other than a Certificate II, Certificate III, Certificate IV or Diploma

Note: Students who progressed to a Certificate IV in Wool Classing

Training pathways to the Certificate IV in Wool Classing (Course number 1011) have been singled out to distinguish between student determined pathways and the structured pathways to the Wool classing Certificate IV developed by TAFE NSW teaching sections to encourage successful completion of the qualification.

The commonly used structured pathway is over two years part time (four semesters) and has the student enrolling firstly in SOA Rural Production Studies and only later in the Certificate IV. In essence, the choice of skills development pathway is, in this case, determined by TAFE NSW.

Students are encouraged to enrol in the qualification course this way because it is cost effective with students only incurring the higher cost of a Certificate IV enrolment closer to the end of their training. It is easier for NSW TAFE to market this training this way when many in the target market do not have large disposable incomes and no strong training culture. Also from the TAFE NSW perspective completion of the SOA provides a course completion, and is perceived to reduce the number of students who don’t complete a full qualification. This is supported by the completion data for this course.
Table 1 Training history Analysis key results for students who completed skill sets/SOA in Rural Production Studies (946) in 2005

<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as:</th>
<th>% of those enrolled</th>
<th>% of students who completed 946 in 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>enrolled</td>
<td>completed</td>
<td></td>
</tr>
<tr>
<td>ANY COURSE</td>
<td>487</td>
<td>409</td>
<td>84%</td>
</tr>
<tr>
<td>Qualification courses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cert I</td>
<td>24</td>
<td>9</td>
<td>38%</td>
</tr>
<tr>
<td>Cert II</td>
<td>75</td>
<td>25</td>
<td>33%</td>
</tr>
<tr>
<td>Cert III</td>
<td>98</td>
<td>56</td>
<td>57%</td>
</tr>
<tr>
<td>Cert IV</td>
<td>105</td>
<td>80</td>
<td>76%</td>
</tr>
<tr>
<td>Cert IV 1011</td>
<td>67</td>
<td>59</td>
<td>88%</td>
</tr>
<tr>
<td>Dip</td>
<td>18</td>
<td>8</td>
<td>44%</td>
</tr>
<tr>
<td>Cert II, Cert III, Cert IV or Dip</td>
<td>232</td>
<td>148</td>
<td>64%</td>
</tr>
<tr>
<td>Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011</td>
<td>180</td>
<td>95</td>
<td>53%</td>
</tr>
<tr>
<td>Cert II, Cert III or Cert IV</td>
<td>225</td>
<td>144</td>
<td>64%</td>
</tr>
<tr>
<td>Cert II, Cert III or Cert IV excluding Cert IV 1011</td>
<td>173</td>
<td>91</td>
<td>53%</td>
</tr>
<tr>
<td>Ag Cert II, Cert III, Cert IV or Dip</td>
<td>32</td>
<td>22</td>
<td>69%</td>
</tr>
<tr>
<td>Non qualification courses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOA 946</td>
<td>150</td>
<td>124</td>
<td>83%</td>
</tr>
<tr>
<td>All SOAs</td>
<td>274</td>
<td>225</td>
<td>82%</td>
</tr>
<tr>
<td>CRS IN</td>
<td>117</td>
<td>103</td>
<td>88%</td>
</tr>
<tr>
<td>Other</td>
<td>112</td>
<td>98</td>
<td>88%</td>
</tr>
</tbody>
</table>

| Of the students who completed SOA 946 in 2005, how many did NOT further engage with TAFE? |
|---------------------------------|-------------------------------|
| No further re-engagement        | 611                           |
| 56% of total students           |                               |

<p>| Of the students who completed SOA 946 in 2005, how many previously undertook Cert II to Diploma |
|---------------------------------|-------------------------------|</p>
<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as:</th>
<th>% of those enrolled</th>
<th>% of students who completed 946 in 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cert II, Cert III, Cert IV or Dip</td>
<td>222</td>
<td>105</td>
<td>47%</td>
</tr>
</tbody>
</table>

<p>| Of the students who completed SOA 946 in 2005, how many concurrently (defined as &quot;in 2005&quot;) undertook: |
|---------------------------------|-------------------------------|</p>
<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as:</th>
<th>% of those enrolled</th>
<th>% of students who completed 946 in 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cert II, Cert III, Cert IV or Dip</td>
<td>134</td>
<td>62</td>
<td>46%</td>
</tr>
<tr>
<td>Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011</td>
<td>116</td>
<td>44</td>
<td>38%</td>
</tr>
<tr>
<td>Ag Cert II, Cert III, Cert IV or Dip</td>
<td>34</td>
<td>13</td>
<td>38%</td>
</tr>
</tbody>
</table>

Course abbreviations:
- Cert I Certificate I
- Cert II Certificate II
- Cert III Certificate III
- Cert IV Certificate IV
- Dip Diploma
- SOA Statement of Attainment
- SOA 946 Rural production studies SOA
- CRS IN Accredited Course in
- STMT Statement
- TAFE PLUS TAFE PLUS Statement
- TAFE Statement
- COLL. STM College Statement
- Ag Cert II to Dip Certificate II, III, IV and Diploma in Agriculture from RTE03
- Certificate IV in Wool Classing
Of the students who enrolled in further TAFE training most were from the younger age bracket (25 years and under) or the prime working age bracket (26-45 years). Older age brackets were less likely to have engaged in further training. The age bracket analysis is shown in Table 2 below.

Table 2 Further engagement in training by age

<table>
<thead>
<tr>
<th>Age bracket</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 years and under</td>
<td>151</td>
<td>31%</td>
</tr>
<tr>
<td>26 – 35 years</td>
<td>80</td>
<td>16%</td>
</tr>
<tr>
<td>36 – 45 years</td>
<td>105</td>
<td>22%</td>
</tr>
<tr>
<td>46 – 55 years</td>
<td>90</td>
<td>18%</td>
</tr>
<tr>
<td>Over 55 years</td>
<td>61</td>
<td>13%</td>
</tr>
</tbody>
</table>

Identifying the range of skill sets undertaken

Additional analysis of the 2005 completion data for SOA 946 was undertaken to uncover the range and types of skill sets that students had completed. Details of the individual modules completed by students were extracted from the SCIS. Where available, equivalence tables were used to convert modules to units of competency. Modules without equivalence were recorded using their module number. This was used to categorise each skill set in terms of the nature of the skill set and its AQF level. A single level was assigned to each skill set based on the rules shown in Table 3. To further classify the skill sets, job functions were also assigned to each skill set. The job functions were developed for each group of units using a combination of the outcomes of the units, the relationships between units and the AQF level of the units making up the skill set. Where there was no obvious relationship between the units in the skill set, the skill set was allocated a “Not specified” job function. This analysis has been used to examine the breadth of skills addressed through RTO developed skill set training in the Agrifood sector. The results of this analysis are presented in Tables 4, 5 and 6.

Table 3 Rules for assigning AQF levels to skill sets

<table>
<thead>
<tr>
<th>Rules for allocating Skill Set Levels</th>
<th>Assigned AQF Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>For skill sets with three or less units of competency</td>
<td>the highest level unit</td>
</tr>
<tr>
<td>For skill sets with four to six units of competency</td>
<td>the lowest level of the two highest level units</td>
</tr>
<tr>
<td>For skill sets with seven to twelve units of competency</td>
<td>lowest level of the three highest level units</td>
</tr>
<tr>
<td>For skill sets with more than twelve units of competency</td>
<td>lowest level of the four highest level units</td>
</tr>
</tbody>
</table>

Key findings

- 292 different skill sets were completed by
- The weighted average size of completed skill sets was 4.7 units of competency.
- 27 job functions including one “Not specified” were identified.(Table 5)
- Three out of the top five completed skill sets were designed to meet compliance training needs in the areas of managing work health and safety and quality assurance programs for a rural business and chemical compliance.(Table 6)
The two chemical compliance skill sets in the top fifteen demonstrate the difficulties associated with rigid skill set structures. They have three common units and a range of other units to meet the needs of the participants.

The three most popular wool classing skill sets were associated with new approaches to classing wool and would be delivered to already qualified wool classers and wool producers.

85% of students completed skill sets at AQF 3 and above and 39% of students completed skill sets at AQF 4 and above (Table 4).

75% of all skill sets packaged were at AQF 3 and above and 22% were at AQF 4 and above (Table 4).

The majority of the skill sets packaged by students could be used to build qualifications at Certificate III, Certificate IV and Diploma level in a diverse range of rural occupations.
Table 4 Skill sets used and student engagement by AQF Level

<table>
<thead>
<tr>
<th>AQF Level</th>
<th>No. Students</th>
<th>No. Skillsets</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQF1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>AQF2</td>
<td>160</td>
<td>69</td>
</tr>
<tr>
<td>AQF3</td>
<td>498</td>
<td>156</td>
</tr>
<tr>
<td>AQF4</td>
<td>418</td>
<td>53</td>
</tr>
<tr>
<td>AQF5</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>AQF6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>1098</td>
<td>292</td>
</tr>
</tbody>
</table>

Table 5 Number of skill sets developed under each job function

<table>
<thead>
<tr>
<th>Job Function</th>
<th>Number of Skill sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wool classing</td>
<td>62</td>
</tr>
<tr>
<td>Wool Handling</td>
<td>35</td>
</tr>
<tr>
<td>Crop production</td>
<td>21</td>
</tr>
<tr>
<td>Livestock husbandry</td>
<td>20</td>
</tr>
<tr>
<td>Shearing</td>
<td>19</td>
</tr>
<tr>
<td>Business management</td>
<td>18</td>
</tr>
<tr>
<td>Not specified</td>
<td>15</td>
</tr>
<tr>
<td>Chemical application</td>
<td>12</td>
</tr>
<tr>
<td>Livestock management</td>
<td>12</td>
</tr>
<tr>
<td>Machinery operation and maintenance</td>
<td>11</td>
</tr>
<tr>
<td>Work health and safety</td>
<td>11</td>
</tr>
<tr>
<td>Livestock handling</td>
<td>10</td>
</tr>
<tr>
<td>Crop management</td>
<td>9</td>
</tr>
<tr>
<td>Irrigation</td>
<td>8</td>
</tr>
<tr>
<td>Horse husbandry</td>
<td>6</td>
</tr>
<tr>
<td>Work preparation</td>
<td>6</td>
</tr>
<tr>
<td>Business skills</td>
<td>3</td>
</tr>
<tr>
<td>Chainsaw operations</td>
<td>2</td>
</tr>
<tr>
<td>Horse handling</td>
<td>2</td>
</tr>
<tr>
<td>Property maintenance</td>
<td>2</td>
</tr>
<tr>
<td>Viticulture production</td>
<td>2</td>
</tr>
<tr>
<td>Fencing</td>
<td>1</td>
</tr>
<tr>
<td>Land conservation</td>
<td>1</td>
</tr>
<tr>
<td>Machinery operation</td>
<td>1</td>
</tr>
<tr>
<td>Pest management</td>
<td>1</td>
</tr>
<tr>
<td>Poultry handling</td>
<td>1</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>1</td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 Top 15 skill sets completed within the SOA Rural Production Studies in 2005 by student numbers

<table>
<thead>
<tr>
<th>Job Function</th>
<th>No. of units</th>
<th>AQF range</th>
<th>Allocated AQF level</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work health and safety</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>99</td>
</tr>
<tr>
<td>Land Conservation</td>
<td>7</td>
<td>2 to 3</td>
<td>3</td>
<td>95</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>89</td>
</tr>
<tr>
<td>Wool classing</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>79</td>
</tr>
<tr>
<td>Chemical application</td>
<td>5</td>
<td>1 to 3</td>
<td>3</td>
<td>55</td>
</tr>
<tr>
<td>Wool classing</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>45</td>
</tr>
<tr>
<td>Crop production</td>
<td>7</td>
<td>2 to 4</td>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td>Machinery operation and maintenance</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Wool classing</td>
<td>2</td>
<td>3 to 4</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Shearing</td>
<td>3</td>
<td>2 to 3</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Shearing</td>
<td>4</td>
<td>2 to 4</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Chemical application</td>
<td>6</td>
<td>2 to 3</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Crop production</td>
<td>6</td>
<td>2 to 4</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Crop production</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Livestock management</td>
<td>3</td>
<td>2 to 4</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

Mills, Ranshaw, Crean and Bowman
Students in the Diploma in Agriculture 2004-2010

This analysis focused on students who enrolled in the Diploma in Agriculture between 2004 and 2010. Student’s skills development pathways both prior to and after enrolment in the Diploma in Agriculture were examined. The Diploma in Agriculture is outlined briefly below, along with a discussion of the methodology applied in the analysis of the data and then the key findings.

Background

The Diploma in Agriculture RTE 50103 (TAFE course number 2195) from the RTE03 Rural Production Training package was endorsed in 2003. The qualification is designed to provide the skills and knowledge required to perform the duties of a manager on properties engaged in agriculture. The RTE 50103 Diploma in Agriculture is from the RTE03 Rural Production Training Package.

Students are required to successfully complete 10 units of competency within the packaging rules of the qualification to complete the RTE50103 Diploma in Agriculture.

Identifying training pathways

Student enrolments across TAFE NSW in the RTE 50103 Diploma of Agriculture between 2004 and 2010 were extracted from the SCIS as a text file and converted to an Excel spreadsheet by TAFE NSW project staff. A data set of 422 students resulted. For each of the individual student records, data was extracted from the student enrolment and completion history reports to produce a complete training history. Furthermore, students in this data set had been categorised (by TAFE NSW) as follows:

- Completers - those who had completed Course No. 2195 (where course status = “CC”)
- Closed non-completers - those who had NOT completed Course No. 2195 (where course status = “C”)
- Open non-completers - those who are likely to still be studying Course No. 2195 (where course status = “-”)

This training history was configured for analysis using processing equivalent to that described for the SOA data above. The resultant flat file tables for completers, closed non-completers and open non-completers were imported into Microsoft Excel. Cross tabulation formulae have been constructed for each group as well as for the combined student records to produce the analysis results described below. The quality assurance processes undertaken for this data set were also equivalent to those for the SOA data set. Detailed processes are described in Appendix A.

Key results for this data set are presented in Table 7. Further results from this data set are included in Appendix B, Table 10.

Key findings

In total, 422 students had enrolled in the Diploma in Agriculture RTE 50103 (TAFE course number 2195) between 2004 and 2010. Analysis of training histories found the following:

- Overall, 278 students (66%) completed the Diploma in Agriculture between 2004 and 2010, 19% did not complete whilst 15% were still studying at the time of this study.
- Forty-five percent of Diploma in Agriculture students completed a CRS IN or SOA prior to enrolling in the diploma. The Diploma completion rate for this group was 73%.
One fifth of Diploma in Agriculture students did not enrol in any course before enrolling in the diploma. The Diploma completion rate for this group was 66%.

Just over two-fifths (41%) of students who completed the Diploma in Agriculture completed an SOA prior to completion of the diploma, whilst close to one-fifth (18%) had successfully completed SOA 946 prior to completion of the diploma.

Half of all students who completed the Diploma in Agriculture completed a CRS IN or SOA prior to completion of the diploma.

Only seven percent of students who completed the Diploma in Agriculture completed an SOA afterwards; four percent completed SOA 946 afterwards and five percent completed a CRS IN afterwards.

Almost two-thirds (66%) of students of the Diploma in Agriculture were 26 years and older at the time they were enrolled.

Limitations of the training history analysis

Cautions surrounding the training history analysis are as follows:

- Training histories have been developed using the student identification number stored for each student in the TAFE NSW Student Course Information System. It is possible that training histories for some students are not complete, especially where students studied before 1990 when student records were kept in hard copy roll books in colleges. These records were transferred to the computerised Student Course Information System in the early 1990s leading to some duplicate student numbers. The likelihood of this occurring is reasonably low in the current computerised system and is generally restricted to issues of data matching where students spell their names differently or provide different birth dates.

- TAFE NSW data provides a course enrolment date as a year only. For this reason, distinction has been drawn between courses studied in 2005 (which were potentially studied concurrent to SOA or adjacently to the SOA in the same year) and courses studied after 2005. Similar distinctions have been made in the analysis of Diploma student training histories.

- In cases where students had enrolled in multiple courses in the one year, a student’s first engagement with the TAFE NSW VET system could not be attached to a specific course. For this reason, data related to students’ first engagement is tied only to their first engagement with TAFE NSW.

- The number of students that have engaged in Certificate III in Agriculture (Course no. 797) and Certificate IV in Agriculture (Course no. 2483) may be slightly underestimated as a result of a change from RUA98 Training Package to RTE03 Training Package.
Table 7 Training history Analysis results for Diploma in Agriculture students 2004-2010

<table>
<thead>
<tr>
<th>By Student completion status</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commenced course 2195</strong></td>
<td>422</td>
<td></td>
<td>278</td>
<td>66%</td>
<td>79</td>
<td>19%</td>
<td>65</td>
<td>15%</td>
<td>422</td>
</tr>
<tr>
<td><strong>Completed an SOA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>158</td>
<td>37%</td>
<td>114</td>
<td>41%</td>
<td>23</td>
<td>9%</td>
<td>21</td>
<td>8%</td>
<td>158</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>25</td>
<td>6%</td>
<td>21</td>
<td>7%</td>
<td>7</td>
<td>5%</td>
<td>3</td>
<td>1%</td>
<td>25</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>47</td>
<td>11%</td>
<td>40</td>
<td>14%</td>
<td>5</td>
<td>6%</td>
<td>2</td>
<td>3%</td>
<td>47</td>
</tr>
<tr>
<td><strong>Completed 946 SOA</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>60</td>
<td>14%</td>
<td>51</td>
<td>18%</td>
<td>2</td>
<td>3%</td>
<td>7</td>
<td>11%</td>
<td>60</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>14</td>
<td>3%</td>
<td>12</td>
<td>4%</td>
<td>2</td>
<td>3%</td>
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<td>0%</td>
<td>14</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>24</td>
<td>6%</td>
<td>23</td>
<td>8%</td>
<td>1</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>24</td>
</tr>
<tr>
<td><strong>Completed Cert III 797</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>45</td>
<td>11%</td>
<td>32</td>
<td>12%</td>
<td>8</td>
<td>10%</td>
<td>5</td>
<td>8%</td>
<td>45</td>
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<tr>
<td>Post commencing 2195</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>3</td>
<td>1%</td>
<td>2</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>2%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Completed Cert IV 2483</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Prior to commencing 2195</td>
<td>61</td>
<td>14%</td>
<td>49</td>
<td>18%</td>
<td>9</td>
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<td>5%</td>
<td>61</td>
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<tr>
<td>Post commencing 2195</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
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<td>1%</td>
<td>3</td>
<td>1%</td>
<td>1</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td><strong>Completed CRS IN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>60</td>
<td>14%</td>
<td>47</td>
<td>17%</td>
<td>8</td>
<td>10%</td>
<td>5</td>
<td>8%</td>
<td>60</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>16</td>
<td>4%</td>
<td>15</td>
<td>5%</td>
<td>1</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>16</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>6</td>
<td>1%</td>
<td>5</td>
<td>2%</td>
<td>1</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>6</td>
</tr>
<tr>
<td><strong>Completed CRS IN or SOA PRIOR to commencing 2195</strong></td>
<td>190</td>
<td>45%</td>
<td>139</td>
<td>50%</td>
<td>27</td>
<td>34%</td>
<td>24</td>
<td>37%</td>
<td>190</td>
</tr>
<tr>
<td><strong>Completed ANY COURSE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>292</td>
<td>69%</td>
<td>204</td>
<td>73%</td>
<td>53</td>
<td>67%</td>
<td>35</td>
<td>54%</td>
<td>292</td>
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<tr>
<td>Post commencing 2195</td>
<td>67</td>
<td>16%</td>
<td>55</td>
<td>20%</td>
<td>11</td>
<td>14%</td>
<td>1</td>
<td>2%</td>
<td>67</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>92</td>
<td>22%</td>
<td>75</td>
<td>27%</td>
<td>12</td>
<td>15%</td>
<td>5</td>
<td>8%</td>
<td>92</td>
</tr>
<tr>
<td><strong>DID NOT ENROL IN ANY COURSE PRIOR to commencing 2195</strong></td>
<td>85</td>
<td>20%</td>
<td>56</td>
<td>20%</td>
<td>17</td>
<td>22%</td>
<td>12</td>
<td>18%</td>
<td>85</td>
</tr>
</tbody>
</table>
In total, 1098 students completed a SOA in Rural Production Studies in 2005, out of 1128 who had enrolled.

For 40% of students, their enrolment in a TAFE course in 2005 was their first engagement with the TAFE NSW VET system.

Just under half (44%) of students who completed the SOA in 2005 engaged in further training with TAFE NSW in the period 2005 to 2010.

Thirty-seven percent of students who completed the SOA in 2005 went on to successfully complete some form of further training with TAFE NSW.

344 students who completed the SOA in 2005 enrolled in a SOA course or a CRS IN course in the years that followed. Completion rates for all SOA and CRS IN courses undertaken by students since 2005 exceeded 80%.

232 students who completed the SOA in 2005 enrolled in Certificate II, Certificate III, Certificate IV (including Certificate IV in Wool Classing) or Diploma qualification in the years that followed with a completion rate of 64%.

Ten percent of students who completed the SOA in 2005 had previously completed a qualification (Certificate II, Certificate III, Certificate IV or Diploma).
In total, 278 students completed the Diploma in Agriculture between 2004 and 2011, out of 422 who had enrolled.

One fifth of Diploma in Agriculture students did not enrol in any course before enrolling in the diploma.

45 percent of Diploma in Agriculture students enrolled in a CRS IN or SOA prior to enrolling in the diploma.

Half of all students who completed the Diploma in Agriculture completed a CRS IN or SOA prior to completion of the diploma.

11 percent of students who completed the Diploma in Agriculture completed a SOA or a CRS IN afterwards.

The training history analysis and the next stage of the study

The findings of the training history analysis informed participant selection and grouping for the next stage of the study which aimed to gather student views on the skills development pathways they had undertaken. The training history analysis identified the student groupings below as useful to interview to investigate the study’s research questions.
Group 1:

- Students whose first experience of training with TAFE NSW was in the year that they completed a skill sets from Rural Production Studies; combined with
- Students who have only completed skill sets in their training history with TAFE NSW.

For this group, the sample was drawn from the SOA cohort and restricted to those students who had since completed at least one additional TAFE course (whether a SOA or qualification course) to ensure some level of engagement with TAFE. This group provided access to students whose early and perhaps only experiences of training with TAFE NSW involved skill sets. This group was designed to primarily investigate the research questions:

- What role do skill sets play in encouraging the engagement of Agrifood workers/training participants into formal vocational education and training?
- What role do skill sets play in workforce skills development and productivity in the Agrifood industries?

To a lesser extent, the role of skill sets as building blocks was also able to be tested.

Group 2:

- Students who have progressed to complete a Certificate II, III, or IV qualification or a Diploma after completing SOA 946.
- Students who have completed the Diploma in Agriculture between 2004 and 2011 and have completed a CRS IN or SOA prior or post completion of the Diploma.

This group provided access to students who had completed a skill set prior to or after completing a related qualification. This group was designed to primarily investigate the research questions:

- What role do skill sets play in encouraging the completion of higher level Agrifood VET qualifications?
- What role do skill sets play in workforce skills development and productivity in the Agrifood industries?
- What role do skill sets play in meeting Agrifood industry needs for post initial qualification skills development?

Whilst circumstances necessitated a change in data collection methodology, student participants were still sourced from the groups outlined above. The following section outlines the methodology applied and findings from the student interviews.
Student views on training pathways

This stage of the study involved a series of in-depth structured interviews conducted with a subset of the TAFE NSW students for whom training histories had been analysed. This was conducted throughout March and early April of 2012 and aimed to uncover student reasons for undertaking training via skill sets, the benefits of doing so, and the outcomes of such training.

Here we discuss the inputs into the design of this stage, the approach to gathering student views, the analysis and quality assurance processes, limitations of the data, sample characteristics and key findings.

Inputs into stage design

Findings from the training history analysis and Head Teacher discussion group influenced the design of this stage, as outlined below.

Guidance from the training history analysis

The findings of the training history analysis confirmed the skills acquisition pathways to investigate through student interviews. As outlined in the previous section, this was used to guide the selection of potential student participants for the focus groups. Additionally, key questions proposed for the focus groups were assessed against the training history analysis findings to ensure that they were appropriate and tested the pathways identified for investigation.

Head Teacher discussion group

The study initially set out to gather student feedback via a series of focus groups at three regional institutes of TAFE NSW as well as via a telephone survey conducted with a further small sample from both the SOA cohort and the Diploma cohort.

Preliminary input into this stage of the study was gathered via a discussion with several head teachers from the TAFE NSW Agrifood sector. This discussion group was held in December 2011 and involved head teachers from TAFE NSW Western Institute, TAFE NSW Riverina Institute, TAFE NSW Hunter Institute and TAFE NSW Western Sydney Institute. All teachers had been involved in the delivery of the SOA in Rural Production Studies and Diploma in Agriculture courses.

At this meeting a project outline was provided and Head Teachers were encouraged to contribute their ideas, particularly around how to encourage student participation and about suitable locations and timings for the focus groups. The Head Teachers were also encouraged to respond with their views on the research questions. Head Teacher views were recorded and are included, where applicable.

The main recommendations coming out of this meeting were:

- to invite students to participate in focus groups via a written letter, ensuring that the student was enrolled in the Institute surrounding the location of the focus group meeting and that their residential address is within the Institute boundary;
to provide light refreshments at the focus group as an incentive to attend; and
- to conduct the focus groups in late February/March (later than originally planned) as this was likely to yield a better participation result.

Student interview approach

The study initially set out to gather student feedback via a series of focus groups at three regional institutes of TAFE NSW as well as via a telephone survey, with a further smaller sample from both the SOA cohort and the Diploma cohort. However, this methodology was required to be adapted as challenges arose. As a result, primary data collection in this stage of the study was re-designed as a series of in-depth structured interviews conducted with students via telephone.

Focus groups were initially scheduled for three TAFE NSW locations in regional NSW. Two focus groups were scheduled for each location, one day and one evening session, with the aim being to attract between 15 and 20 participants in total for each location. Clear criteria upon which to compose the potential group of participants were developed, based on training history characteristics as outlined above and student attendance at the three regional TAFE institutes.

Recruitment for the focus groups involved mailing an invitation to identified potential participants (letter included in Appendix C), conducting follow-up phone calls to encourage participation and finalising the focus groups one week out from the scheduled session. It became obvious early that this recruitment drive was not delivering the required numbers to conduct focus groups. Issues preventing acceptance included invitees residing some distance from the focus group locations, availability on the days proposed and the impact of recent flooding in the regions on availability. Additionally, several invitees were unable to be contacted via telephone due to contact details being out of date. Encouragingly however, many invitees indicated that they would be willing to spend some time providing their feedback via a telephone interview. For this reason, it was determined that conducting in-depth structured interviews via telephone would be a more successful approach to collecting student feedback and the data collection process was re-designed accordingly.

Because of the change in data collection method, TAFE NSW extended the scope of interviews to include students from a further two regional institutes. The final pool of potential participants numbered 329 students, originating from the following institutes:

- TAFE NSW Western Institute
- TAFE NSW Riverina Institute
- TAFE NSW New England Institute
- TAFE NSW North Coast Institute
- TAFE NSW Hunter Institute

Analysis and Quality Assurance

Data collection

The data collection process was implemented as follows:

- Structured interview templates were created from the original focus group guidelines for students from the SOA and the Diploma cohorts. The templates were then customised to create one for
each student which included the student’s training history and highlighted any particular questions of interest. A sample interview template is provided in Appendix C.

- Interview staff from the Western Research Institute (WRI) were provided a comprehensive briefing on the study and the purpose of the interviews by WRI’s project coordinator. Interview staff conducted trial interviews with the project coordinator to iron out any issues prior to contacting students. Interview staff also signed confidentiality agreements for both WRI and TAFE NSW.

- Interview staff contacted students previously invited to focus groups to make appointments to conduct telephone interviews and subsequently conducted the interviews according to the schedule. Additionally, students from a further two regional institutes who fell into the selection criteria defined (as identified above) were contacted. Attempts were made to contact all students on the lists provided by TAFE NSW.

- The project coordinator checked a sample of interviews conducted by each interviewer at the end of each shift to ensure views recorded were comprehensible. The project coordinator also conducted de-brief sessions at the end of the first few calling shifts to allow interviewers to discuss any issues that had arisen during the interview.

In total, 62 interviews were conducted.

Analysis

Information captured from each in-depth interview was transferred into a Microsoft Excel spreadsheet where it was analysed for key themes and associations. A sample of the coding was checked by a senior researcher not directly involved in the process.

Limitations of the interview data

Limitations surrounding feedback from interview participants are as follows:

- Interview participants were asked to comment on training that had been undertaken several years ago, sometimes up to ten years ago. In several instances, participant recollection of the reasons they had undertaken certain training and the alternatives available at the time was vague, though this often became clearer as the interview progressed and as details of their training histories were discussed with the interviewer.

- As outlined in the training history analysis, the delivery strategy for the Certificate IV in Wool Classing (Course number 1011) was a pathway determined by TAFE NSW rather than the student. Because of this, several participants interviewed for this study who had enrolled in this pathway, were either unaware of their enrolment in the associated SOA or only slightly aware of this enrolment and the reasons for it. As such, some interview questions were less applicable and were not pursued by the interviewer. A total of 15 participants fell into this group. For this reason, the analysis that follows will, where required, distinguish between commentary that includes this cohort of wool classing students and that which excludes these students.

- A handful of participants (6) interviewed for this study had enrolled in TAFE as part of their secondary schooling. In NSW, the Board of Studies manages the VET course and qualifications that can be delivered in the school system. For these participants, training choices were limited to what was on offer at their school and according to Board of Studies restrictions. As such, some interview questions were less applicable and were not pursued by the interviewer.
responses from these participants are, as a result, less enlightening. However as this affects only a handful of participants, commentary has not sought to treat this group distinctly.

Sample characteristics

By way of re-capping the interview sampling structure, participation was sought from two student groupings:

1. Students whose first experience of training with TAFE NSW was through SOA 946 and students who had only completed skill sets.

2. Students who have progressed to complete a Certificate II, III, or IV qualification or a Diploma after completing SOA 946; and those who have completed the Diploma in Agriculture between 2004 and 2011 and have completed a CRS IN or SOA prior or post completion of the Diploma.

Given challenges in encouraging participation and the size of the population in question, sampling for the interviews was never designed to be statistically representative. As such, the results obtained in this stage of the study are not necessarily broadly generalisable, rather they represent the subjective opinions and attitudes of the research participants only. Despite this, given a population of 329 students, the resulting sample of 62 (response rate of 19%) does provide a significant contribution to the evidence about student views on workforce development through skill sets.

In total, interviews were conducted with 62 students, 37 of which belonged to Group 1 and 25 to Group 2 above. Some key characteristics of participants interviewed are outlined below:

Educational attainment:

- More than half (58%) of the participants had completed Year 12 or equivalent at school, 11% had completed Year 11 or equivalent, 21% had completed Year 10 or equivalent, whilst five percent each had completed Year 8 or Year 9.

- Fifteen percent of participants had enrolled in TAFE whilst at school, over one quarter (27%) had not had a break from formal study prior to enrolling in TAFE, 18% had up to a two year break from formal study prior to enrolling in TAFE, 13% had between 2 and 10 years break, 15% had between 10 and 15 years break and 11% had over 15 years break.

- The highest completed TAFE qualification for participants was:
  - 26% - Diploma;
  - 27% - Certificate IV;
  - 18% - Certificate III;
  - 3% - Certificate or Certificate II; and
  - 26% - skill set (SOA/CRS IN).

Employment status:

- Participants were most commonly employed full-time (39%) or self-employed (31%). Ten percent of participants were employed part-time whilst eight percent were employers.

- Thirty-seven percent of participants identified themselves as farmers whilst ten percent operated their own businesses not related to farming. Close to one-fifth of participants (19%) were employed on farms whilst 34% were employed elsewhere.
Key findings

The sections below outline key findings of the interviews as they relate to:

- the reasons for undertaking skill set training;
- the impact of skill set training;
- skill sets encouraging engagement in further formal vocational education;
- skill sets encouraging the completion of higher level Agrifood VET qualifications including as building blocks to those qualifications; and
- the impact of skill set training undertaken post qualification.

Having secured the input of a small group of employers, a brief discussion of employer perspectives on skill set training will also be included.

Reasons for undertaking skill set training

The reasons for undertaking skill set training were assessed in terms of purpose of training, specific skills sought and the benefits of doing a skill set rather than a longer qualification.

Purpose of the training

Participants indicated that the top four reasons for undertaking skill set training (via a CRS IN or SOA) were:

- to improve practices or obtain compliance (licensing) for practices on their own business or farm (28 participants);
- to improve their knowledge, upgrade their skills or remain current (23 participants);
- for licensing or registration purposes (17 participants); or
- to gain skills for employment (16 participants).

Other common reasons for undertaking the training were:

- because it was part of the Certificate IV in Wool Classing (15 participants);
- to gain specific knowledge of an emerging area (9 participants);
- because it was available locally or onsite at the workplace (8 participants);
- because it was part of the school curriculum (6 participants);
- because it was organised or paid for by the employer or an organisation (6 participants); or
- to test interest level or a career idea (6 participants).

Skills sought

Skills sought by participants were diverse, however, most commonly they were in the areas of:

- wool classing (26 participants);
- chemicals handling and application (13 participants);
- operating machinery including fork-lifts, backhoes, excavators, front end loaders and skid steer loader (bobcat) (12 participants); and
organic farming (8 participants).

Other skills that participants sought included occupational health and safety licensing; shearing; tree crop farming; general farming and farm management skills; land and soil management for farming; and livestock and horse management skills.

**Benefits of doing a skill set rather than a qualification**

Participants were asked a series of related questions in order to develop an understanding of the perceived benefits of undertaking training via a skill set (SOA or CRS IN). Specifically, the questions sought to determine:

- awareness of any qualification courses (certificates or diplomas) that would have provided participants with the same skills as those developed through the skill set, including where appropriate, the reasons for not enrolling in the longer course;
- inclination to undertake a qualification course if the shorter skill set had not been available; and
- the features of the skill set delivery which appealed to the participant.

The main findings were:

- Excluding participants who undertook the SOA as part of the wool classing certificate, over half of the participants (51%) were unsure about the existence of qualification courses and 13% did not believe qualification courses existed.
- Only 13 participants (28% of those excluding wool classing students) believed that a certificate or diploma level course that would have provided the same skills development existed. Of these participants, only three indicated a willingness (in retrospect) to undertake these courses.
- The prevalent responses from all participants regarding the features of the skill set delivery which appealed to them were:
  - the small time commitment required (33 participants);
  - the ability to manage other work commitments and limit the loss of income (22 participants);
  - the ability to focus on specific, relevant and practical skills (20 participants);
  - the relatively low cost of the training (12 participants); and
  - the ability to undertake training locally or even on-site, at a business/farm location (9 participants).

Participants who undertook the SOA as part of the wool classing certificate provided a range of responses that reflected varying degrees of awareness of the delivery strategy in place. Four participants who recognised the delivery strategy in place, acknowledged benefits such as small time commitment, lower cost of training and the ability to continue earning an income while training.

A selection of comments highlighting the benefits of skill set training is included below:

“The way the course was offered (on farm) was a major drawcard - didn’t have to go anywhere or lose too much working time.”

Agricultural contractor, Western NSW
“Soft rolling skin wasn’t covered in the certificate course because it was an emerging area.”

Agricultural sector employee, Northern NSW

“It was convenient time wise, and the location meant no travelling.”

Farm manager, Western NSW

“Longer courses are not easy to do because the workload varies across the year - some seasons are really frantic and the off time is really quiet. Short courses are the best way to handle this (2-4 days usually).”

Agricultural sector employee, Northern NSW

“Too many other things happening, time consideration – just needed minimum compliance.”

Agricultural sector consultant, Northern NSW

“The course was fairly heavily subsidised so cost was definitely an issue - as a bundled course, it was really good value.”

Non-agricultural sector employee, Western NSW

“I wanted to test my interest to see if I should go down this path for work.”

Non-agricultural sector employee, Western NSW

“I was able to watch my students over time and work out what they needed, then enrol in short courses to cater for them.”

Secondary school teacher, North Coast

“Most people were studying around other study or around work so the flexibility of being able to stretch the wool classing certificate out over a couple of years through the SOA was good.”

Agricultural sector employee, Hunter

In the main, interview participant responses confirmed opinions gathered from head teachers via the group discussion held in December 2012. The perceived benefits of training via skill sets that head teachers gave greatest weight to were:

- flexibility in terms of being able to customise the course content to the requirements of the job and have content span across several unit levels;
- flexibility in terms of the timing of the course, especially in terms of being able to schedule training around peaks in the production cycle;
- smaller groupings of units being less intimidating than longer courses to some students; and
- the use of a skill sets as a stepping stone to a qualification.

Impact of skill set training

Skill set training was assessed in terms of its impact on employment opportunities, its impact on workplace tasks and its impact on workplace productivity. Opinions on skill set impact were gathered where applicable, that is, where circumstances surrounding the training, the participant’s intention in undertaking the training and employment status were relevant to the question.
Employment opportunities

There was moderate support for the impact of skill set training on employment opportunities. Thirty-six participants provided an opinion on employment impacts with the majority speaking about positive or potentially positive impacts arising from the training undertaken as follows:

- The most common positive impact described was that it qualified the participant for a wider range of jobs (10 participants).
- Participants also suggested that it had either resulted in employment or met a condition of their current employment (5 participants) or that it had improved their earning capacity (5 participants).
- Eight participants suggested that the skill set training probably would have improved their employment opportunities but that they hadn’t pursued employment at the time to test this.

On the other hand however, ten participants indicated that the skill set training had had little impact on their employment opportunities or conditions. Many of these participants had sought compliance for tasks already being performed in their workplace or were not seeking employment opportunities (several were managing their own farms/businesses).

Comments regarding employment outcomes included:

“Provided me with extra income, especially during the drought years. Gave me flexibility and the ability to move around in quiet seasons.”

Farmer, Western NSW

“Was able to get a job straight away after doing the shearing course.”

Agricultural contractor, Western NSW

“The skills were transferrable - opened up opportunities in a wide geographical area and across a couple of industry sectors plus having the tickets boosted my hourly rate.”

Non-agricultural sector employee, Western NSW

“Don’t think it had any impact on my earning capacity in farming.”

Farm Manager, Western NSW

“Gave me more opportunities to do other jobs whilst working as a farm hand, and gave me better opportunities outside of these farms but not necessarily paid better.”

Farm Manager, Southern NSW

“Dozer course didn’t help me get into the mines - need prior learning on large machinery in the mining industry, but possibly would have helped with civil work.”

Mining sector employee

“Made me qualified to do the job my employer required.”

Farm Manager, Western NSW

Workplace tasks

Participants noted the following main job function areas impacted by skill set training:

- wool classing (11 participants);
- chemical purchase and application (5 participants);
- general farm operations (5 participants);
- machinery related tasks (4 participants); and
- shearing and sheep management tasks (3 participants).

Other areas impacted included tasks related to organic farming, farm management activities and livestock management.

In contrast, eight participants indicated that there had been no real impact on the tasks they undertook in the workplace. Half of these participants had sought compliance for tasks already being performed in their workplace or for work on their own farms, whilst others had enrolled in the course as a pathway to a diploma qualification.

**Skill sets and workplace productivity**

Thirty-two participants provided an opinion on the workplace productivity impacts of skill set training, with the majority being self-employed, employers or employed full-time on family operated farms. There was strong support amongst interview participants for skill set training having a positive impact on workplace/business productivity, however, a small handful of participants suggested that the impact had been purely regulatory or safety related. The most common comments surrounding improved productivity were:

- that the skill set training had removed the need to hire or employ someone else to perform the job function (11 participants);
- that it had had an impact on the quality of the product or output from the business/farm (7 participants);
- that it had had an impact on farm decisions and decision processes (5 participants);
- that business/farm efficiency had improved (3 participants);
- that it had had improved compliance (3 participants); and
- that it had improved business/farm safety (2 participants).

A selection of comments highlighting the productivity impacts of skill set training is included below:

"Meant we didn’t have to employ a wool classer - kept our costs down."
Former farmer, Western NSW

"I was able to produce the type of wool I wanted."
Farmer, Western NSW

"I've reduced chemical use as much as possible and I've noticed an increase in soil microbial activity."
Macadamia Farmer, North Coast

"I've made some fairly significant operational changes and this has contributed to a 25% rise in productivity on the farm."
Macadamia Farmer, North Coast

"Has made us more aware of what to do, how to store things and make them safer, preventing injuries."
Farmer, Southern NSW
“Has been financially beneficial - trees are going brilliantly - kernel recovery averages 38% when the industry average is around 33%.”

Macadamia Farmer, North Coast

“I’m producing a better product as a result.”

Grazier, Southern NSW

Skill sets encouraging engagement in further formal vocational education

Feedback from interview participants was sought regarding their satisfaction with skill set training undertaken, their inclination to undertake further education with TAFE and their time away from formal training prior to enrolling in a skill set.

Satisfaction with skill set training and inclination to undertake further training

In general, participants expressed considerable satisfaction with the skill set training they had received from TAFE. Comments gathered during interviews suggest that positive experiences through skill set training could and have, in many instances, lead to further enrolments:

“Positive learning experiences with TAFE have led to lifelong interest in learning and I’ve done many courses in other fields.”

Farmer, Western NSW

“The TAFE teachers at Wollongbar are particularly passionate and enthusiastic. I’ve had very good experiences with TAFE starting with the SOA in 2005 and I’ve continued my study with TAFE since then.”

Macadamia farmer, North Coast NSW

“Gave me a taste for the TAFE environment and I’d feel comfortable going back to TAFE if need be.”

Farm Employee, Southern NSW

“Very impressed with shearing school setup at Dubbo - gave me a good impression of TAFE as a trainer.”

Grazier, Southern NSW

“Yes, I’d take on further TAFE training if needed.”

Macadamia farmer, North Coast NSW

“I’m thinking about doing the same rural production studies course again sometime this year to see what updates have happened and to bring my own knowledge to the class room.”

Macadamia farmer, North Coast NSW

Eighteen interview participants who had only completed skill sets and lower level certificate courses were asked whether or not they would consider undertaking certificate or diploma level courses with TAFE in the future. Responses were neither predominantly in favour (10 participants) nor against (8 participants) undertaking higher level qualifications and, as expected, the age of the participant influenced attitude toward further training. Comments included:

“If it was necessary to get the knowledge I’d consider a longer course.”

Macadamia farmer, North Coast NSW
“I’d feel comfortable to take on further higher level training given my experiences so far.”

Farmer, Western NSW

“I’m 56 years old and I’ve done all the training I need unless it’s required by the government.”

Farmer, Southern NSW

“Mainly because of my age and the fact that I’m fairly established in my business, short courses and the Internet would be my main source of knowledge now.”

Macadamia farmer, North Coast NSW

“Not at my stage of life.”

Farmer, Southern NSW

“Only if in relevant skills and also if time permits. Need the skills not the piece of paper. Pieces of paper do not mean much in practical terms.”

Farming supplies business, Western NSW

**Time away from formal training**

Responses to the interviews suggest that skill set training is also able to engage people in training who have spent some time away from formal education. Just over one quarter (26%) of interview participants whose first experience of TAFE was through SOA 946 or who had only completed skill sets had enrolled in TAFE after at least a ten year break from formal study.

**Skill sets encouraging the completion of higher level Agrifood VET qualifications including as building blocks to these qualifications**

Where appropriate, feedback from interview participants was sought regarding the role of prior, related skill set training in facilitating the completion of higher level qualifications with TAFE. Higher level qualifications were taken to mean VET Certificate IV and above.

Where interview participants had progressed from skill set training to the completion of higher level qualifications (excluding students of Certificate IV in Wool Classing), their comments tended to support the notion of skill sets as pathways or building blocks to higher qualifications. Just over one-third of interview participants, excluding wool classing students (17 participants) discussed the impact of their skill set training on their completion of higher level qualifications. The predominant view was that skill set training had assisted with the completion of higher level qualifications, most commonly through credit awarded for equivalent units already completed or through the recognition of prior learning (14 participants). Comments included:

“Got credit for the chemicals content in the diploma which enabled me to finish it more quickly.”

Farmer, Northern NSW

“Definitely helped with RPL.”

Farm Manager, Northern NSW

“Yes, even though I only completed a few units of the short course I was able to get credit for these in the Diploma.”

Employee, Training sector, Southern NSW
“Got credits for short course units as well as RPL for knowledge developed outside of TAFE on the farm - All led to a shortened TAFE experience to get the diploma.”

Farm employee, Southern NSW

Some level of support for the notion of skill sets being used explicitly as building blocks towards higher level qualifications was evident where participants spoke of their own enrolment strategies using short courses that would stage either the cost or work commitment required to complete the higher level qualification. Six participants made comments related to this. Furthermore, the staging of Certificate IV in Wool Classing via successive enrolments in statements of attainment is a clear example of a TAFE NSW established “building blocks” approach to the attainment of a higher level qualification.

Comments included:

“Did the short course to get units up towards the diploma without incurring the cost of the diploma - was advised that I wouldn’t be able to finish the diploma in one year by distance education so was better off to pay for the short course and complete the diploma in the following year.”

Farm employee, Southern NSW

“Main benefit really was as credit into the diploma - really just a way of staging my diploma.”

Employee, Southern NSW

“Most people were doing the course around other study or around work so the flexibility of being able to stretch it out over a couple of years through the SOAs was good.”

Wool classing student, Hunter region NSW

Three participants noted ways in which the transition from skill set training to higher level qualification training could be improved as follows:

“I had to enrol in further courses myself, wasn’t a seamless process of getting into a higher level course.”

Self-employed, Western NSW

“Downside to doing a short course rather than a trade qualification is that the path to upgrade between courses may be full of repetition.”

Agricultural sector Employee, Western NSW

“Would like TAFE to advise how the SOAs could be converted to higher level quals - be proactive in structuring something for this.”

Macadamia Farmer/employer, North Coast NSW

The impact of skill set training undertaken post qualification

Over one-third of all interviewees (21 participants) had undertaken skill set training post completing a qualification. For the majority (17 participants), the skill set training was related to the qualification they held. Participants had undertaken post qualification skill set training for a range of reasons, the most common being:

- regulatory/licensing requirements in the areas of chemical handling, machinery operation or wool classing (7 participants); and
- to gain knowledge in an area of specialised/emerging content (4 participants).
A selection of comments outlining reasons for undertaking skill set training post qualification are included below:

“I just needed specific skills with superfine wool - not covered in any certificate or diploma courses at the time.”
Wool grower, Victoria

“Needed to get a license for chemical handling - couldn’t do this within the diploma at the time.”
Employee, Western NSW

“Needed to update my wool classer registration.”
Farm manager, Western NSW

“The short course was a useful way to update - soft rolling skin wasn’t covered in standard certificate courses at the time because it was an emerging area.”
Shearer/Wool classer, Northern NSW

“I did a short course with Orange TAFE covering bobcat, front end loader, excavator - needed the ticket for work.”
Farmer, Western NSW

In addition to those who had already completed some form of post qualification skill set training, three participants indicated that they would consider undertaking short courses to update their skills in specific areas if needed in the future.

Employer perspectives

Five students who were interview participants identified themselves as employers. Their comments were overwhelmingly supportive of skill set training conducted by TAFE NSW. Some commentary regarding the value of skill set training to their operations is included below:

“I try to put my staff through at least one short course per year. The short courses are brilliant - 2 day courses are the optimal unless they can be done on-site and this is probably the case for most agricultural enterprises. Many of my staff have relatively low literacy. The TAFE courses are more practically oriented and more accessible for them - the class room is not the ideal environment for them.”
Grazier, Northern NSW

“We approached Wagga TAFE to run the course for our local growers’ group. We also ran the course to get some of the younger generation the skills as well.”
Wool grower, Southern NSW

“There is a real skill issue in the wool industry. There’s an ageing skill base and we need people with the basic skills. People coming in to the industry at a higher level could use the SOA to get a foundation in wool and enable them to relate to people in the industry better.”
Corporate Manager, Wool sector NSW
Summary

In total, interviews were conducted with 62 students out of a potential pool of 329 students. Participants indicated that:

- The top four reasons for undertaking skill set training were to improve practices or obtain compliance (licensing) for practices on their own business or farm; to improve their knowledge, upgrade their skills or remain current; for licensing or registration purposes; or to gain skills for employment.

- The most common skills sought by participants through skill set training were wool classing; chemicals handling and application; operating machinery; and organic farming.

- Skill set training was appealing because of the small time commitment required; the ability to manage other work commitments and limit the loss of income; the ability to focus on specific, relevant and practical skills; the relatively low cost of the training; and the ability to undertake training locally or even on-site.

In terms of the impact of skill set training, interview responses suggested that:

- The impact of skill set training on employment opportunities was moderate with the most common positive impact cited that it qualified the participant for a wider range of jobs.

- The impact of skill set training on workplace/business productivity was positive and considerable with the most commonly cited impacts being that the skill set training had removed the need to hire or employ someone else to perform the job function; or that it had had an impact on the quality of the product or output from the business/farm.

Participants expressed considerable satisfaction with the skill set training they had received from TAFE. Regarding the role that skill set training plays in encouraging further vocational education or in facilitating the completion of higher level qualifications, responses indicated that:

- Positive experiences through skill set training could and have, in many instances, lead to further enrolments; however the inclination of participants who had only completed skill sets and lower level certificate courses to undertake certificate or diploma level courses with TAFE in the future was neither predominantly in favour of this nor against it.

- For those who had progressed from skill set training to the completion of higher level qualifications, the predominant view was that skill set training had assisted with the completion of these qualifications, mainly through credit awarded or through the recognition of prior learning.

Over one-third if interviewees (21 participants) had undertaken skill set training post completing a qualification, most commonly for regulatory/licensing requirements in the areas of chemical handling, machinery operation or wool classing; and to gain knowledge in an area of specialised/emerging content.
Concluding remarks

This section draws on the preceding analysis to answer the research questions:

- What role do skill sets play in workforce skills development and productivity in the Agrifood industries?
- What role do skill sets play in encouraging the engagement of Agrifood workers/training participants into further formal vocational education and training?
- What role do skill sets play in encouraging the completion of higher level Agrifood VET qualifications including as building blocks to these qualifications?
- What role do skill sets play in meeting Agrifood industry needs for post initial qualification skills development?

Findings pertaining to each research question are addressed with reference to key themes arising from the in-depth student interviews interwoven with relevant key findings from the training history analysis and head teacher group discussion where appropriate.

What role do skill sets play in workforce skills development and productivity in the Agrifood industries?

Answers to this question were drawn from participant views about the reasons for and benefits of undertaking skill set training, and the impact of this training on their own workplace opportunities and on workplace productivity. The key findings from student interview feedback suggest that:

- Skill set training contributes to workforce skills development by providing opportunities for students to improve their knowledge, upgrade their skills, meet requirements for licensing or registration and develop skills sought by employers.
- The benefits of skill set delivery are heavily focused on “enabling” features such as the smaller time commitments required, the lower cost and the ability to manage work commitments and limit the loss of income.

Further findings related to the impact of skill set training are:

- A considerable number of interview participants spoke positively about the realised or potential employment outcomes of skill set training. In contrast, however, several others indicated that the impact on employment opportunities or conditions had been minimal.
- Support for the positive impact of skill set training on workplace productivity was strong, especially with regard to reducing the need to hire staff and the improvement in quality of the product or output from the business/farm.
What role do skill sets play in encouraging the engagement of Agrifood workers/training participants into further formal vocational education and training?

The key findings of the training history analysis indicate that:

- skill set training is appealing to students across the age spectrum and is a common entry point into the TAFE educational environment; and
- that skill set training often leads to further TAFE training being undertaken.

The training history findings are supported by the positive comments of interview participants who, in the main, appear to be inclined to undertake further training with TAFE should the need arise. This is particularly the case for further short courses, however, support for undertaking higher level qualifications is not as clear with some participants suggesting that their age and the time commitments required would likely prevent them from undertaking any substantial training course.

Skill set training is unlikely to be displacing training in higher level qualifications to any large degree, as of those participants who were aware of higher level courses, only a handful indicated that they would have undertaken the course if the shorter skill set course had not been available. In this way, skill set training appears to be capturing students who would otherwise be less likely to undertake training.

What role do skill sets play in encouraging the completion of higher level Agrifood VET qualifications including as building blocks to qualifications?

The key findings of the training history analysis indicate that progression from skill set training to higher level qualifications is occurring to varying degrees with:

- 13% of students who completed the SOA 946 in 2005 having completed a Certificate II, Certificate III, Certificate IV (including Certificate IV in Wool Classing) or Diploma qualification in the years that followed; whilst
- half of all students who completed the Diploma in Agriculture between 2004 and 2011 had completed a CRS IN or SOA prior to this.

Responses from the interview participants regarding their inclination to undertake higher level qualification courses are also less convincing than the positive training trajectories of Diploma students outlined above.

Feedback from interview participants regarding the notion of skill sets as a building block to higher level qualifications has some merit:

- the majority of those participants who had completed higher level qualifications indicated that previous skill set completion had provided some assistance in completing the higher level course; whilst
- explicit “building blocks” approaches being taken by students were uncovered by a few interviews.
Of note, however, is the TAFE NSW delivery strategy for the Certificate IV in Wool Classing which is designed to encourage students to complete a qualification through manageable units of training. Students undertaking the structured pathway using the process of enrolling in manageable groups of units through the Rural Production Studies SOA have relatively high completion rates for the Certificate IV Wool Classing qualification.

What role do skill sets play in meeting Agrifood industry needs for post initial qualification skills development?

Findings from the training history analysis indicate only limited uptake of skill set training post completion of a qualification, as reiterated below:

- Ten percent of students who completed SOA 946 in 2005 had previously completed a qualification (Cert II, Cert III, Cert IV or Diploma).

- 11 percent of students who completed the Diploma in Agriculture completed a SOA or a CRS IN afterwards. These results may underestimate post qualification engagement in skill sets as more than 50% of the Diploma in Agriculture completions occurred after 2008.

- In contrast, over one-third of all interviewees (21 participants) had undertaken skill set training post completing a qualification. For the majority (17 participants), the skill set training was related to the qualification they held. Participants had undertaken post qualification skill set training for a range of reasons, the most common being: for regulatory/licensing requirements in the areas of chemical handling, machinery operation or wool classing; or to gain knowledge in an area of specialised/emerging content. Post qualification skill set training also had a role to play in skills development and productivity.
References

Mills, J Crean, D, Ranshaw, D & Bowman, K 2012, Workforce skills development and engagement in training through skill sets: literature review, NCVER, Adelaide.
Appendices

Appendix A - Detailed training history analysis methodology

Appendix B - Training history analysis results

Appendix C - Letter of invitation to focus group participants
  - Participant interview template
Appendix A

Detailed training history analysis methodology

Statement of Attainment in Rural Production Studies

Data extraction and re-configuration process

The procedure to extract and re-configure data from the TAFE NSW Student Course Information System (SCIS) into a format required to analyse completion rates and training pathways is described below.

- Student enrolments across TAFE NSW in SOA 946 in 2005 were extracted from the TAFE NSW SCIS. A data set of 1098 students who had completed the SOA resulted. For each of the individual student records, data was extracted from the student enrolment and completion history reports. This included student number; date of birth; individual course numbers; year enrolled; status of the enrolment (course complete, course closed incomplete or course open incomplete). This data was exported to a Microsoft Excel Spreadsheet in a format whereby each student could have multiple records, according to the number of courses in which they had enrolled.

- In order to produce the required analysis, the data needed to be re-configured such that a single (flat file) record summarising training history could be produced for each student. The steps taken were:
  - Using Microsoft Excel, create a list of distinct students who had completed the SOA and to apply a simple age calculation formula to calculate student age from date of birth and age at the time of undertaking the SOA. Together, the distinct student Id and age data formed the base student record file.
  - Importing the base student record file into a Microsoft Access database to create a student record table with a unique primary key on the Student Id field and attaching a series of training history flags to this table to be populated in a process described below. Training flags were constructed to store information about courses undertaken prior to, concurrent to, or after the course in question, as well as the completion status of the course.
  - Importing the original student training history file provided TAFE NSW into the Microsoft Access database, allowing for multiple records per student.
  - Populating the training history flags in the student record table using a set of SQL Update queries that link the student record and student training history tables. For each training history flag there is a separate update query which has a specific “where” clause selecting the appropriate records.
  - The resultant flat file contains the student ID, age and a number of training history flags relating to specific course completions.

Quality Assurance

Data checking has been performed at each step of the extraction, re-configuration and analysis process as follows:
- All student enrolment data from the TAFE NSW SCIS was checked for duplicate enrolments, identifying students who had enrolled in the SOA more than once in the calendar year and flagging the associated records.

- The population of Microsoft Access database tables with data from Excel was checked to ensure that all data was correctly imported.

- Each SQL Update query was checked twice to ensure that the correct update field and “where” clause was in place.

- A sample of five students was checked after each query was run, to ensure that the correct flagging had been applied.

- All student history flags were manually checked against the original data provided by TAFE NSW. For each flag, the original data was manually filtered to ensure that the same subset of students was produced.

- Check totals have been included in calculation worksheets to ensure that all data balances to aggregated totals.

- All calculation formulae have been manually checked by a senior research officer not involved in the construction of the worksheets.

Diploma in Agriculture

*Data extraction and re-configuration process*

The procedure to extract and re-configure data from the TAFE NSW SCIS into a format required to analyse completion rates and training pathways is described below.

- Student enrolments across TAFE NSW in the Diploma of Agriculture RTE 50103 (TAFE course number 2195) between 2004 and 2011 were extracted from the TAFE NSW SCIS. A data set of 422 students who had enrolled in the Diploma, whether they had completed the course or not, resulted.

- Processing equivalent to that described for the SOA data above was carried out to produce a Microsoft Excel Spreadsheet in a format whereby each student could have multiple records, according to the number of courses in which they had enrolled. Furthermore, students in this data set had been categorised (by TAFE NSW) as follows:
  - Completers - those who had course completed Course No. 2195 (where course status = “CC”)
  - Closed non-completers - those who had NOT course completed Course No. 2195 (where course status = “C”)
  - Open non-completers - those who are likely to still be studying Course No. 2195 (where course status = “-”)

- In order to produce the required analysis, the data needed to be re-configured such that a single (flat file) record summarising training history could be produced for each student within each category. Steps taken to re-configure the student training history into a flat file structure were equivalent to those undertaken for the SOA data set. The quality assurance processes undertaken were also equivalent.

- Each category of students has been processed individually to produce three flat files containing training history flags relating to specific course completions.
## Appendix B

### Training history analysis results

**Table 8**  
**SOA 946 – First experience students**

#### How many students had their first experience of TAFE in 2005?  
First experience defined as "had not enrolled in a course prior to 2005"

<table>
<thead>
<tr>
<th>Student numbers</th>
<th>441</th>
<th>40% of total students</th>
</tr>
</thead>
</table>

#### How many students whose FIRST experience of TAFE was in 2005 went on to complete courses after 2005?

<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>enrolled</td>
<td>completed</td>
</tr>
<tr>
<td>ANY COURSE</td>
<td>148</td>
</tr>
</tbody>
</table>

**Qualification courses:**

| Certificate I | 8 | 1 | 13% | 0% |
| Certificate II | 24 | 3 | 13% | 1% |
| Certificate III | 41 | 22 | 54% | 5% |
| Certificate IV | 42 | 34 | 81% | 8% |
| Certificate IV 1011 | 37 | 32 | 86% | 7% |
| Diploma | 2 | 1 | 50% | 0% |
| Cert II, Cert III, Cert IV or Dip | 85 | 54 | 64% | 12% |
| Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011 | 58 | 25 | 43% | 6% |
| Cert II, Cert III or Cert IV excluding Cert IV 1011 | 85 | 54 | 64% | 12% |
| Ag Cert II, Cert III, Cert IV or Dip | 58 | 25 | 43% | 6% |

**Non qualification courses:**

| SOA 946 | 45 | 39 | 87% | 9% |
| All SOAs | 85 | 71 | 84% | 16% |
| CRS IN | 18 | 18 | 100% | 4% |
| Other | 33 | 28 | 85% | 4% |

#### How many students whose FIRST experience of TAFE was in 2005 did NOT further engage with TAFE?

<table>
<thead>
<tr>
<th>No further re-engagement</th>
<th>293</th>
<th>66% of students whose first experience was in 2005</th>
</tr>
</thead>
</table>

#### How many students whose FIRST experience of TAFE was in 2005 concurrently undertook:

<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>enrolled</td>
<td>completed</td>
</tr>
<tr>
<td>Cert II, Cert III, Cert IV or Dip</td>
<td>33</td>
</tr>
<tr>
<td>Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011</td>
<td>32</td>
</tr>
<tr>
<td>Ag Cert II, Cert III, Cert IV or Dip</td>
<td>8</td>
</tr>
</tbody>
</table>
### Table 9  SOA 946 – Non first experience students

**How many students did NOT first experience TAFE in 2005?**
First experience defined as “had not enrolled in a course prior to 2005”

| Student numbers | 657 | 60% of total students |

<table>
<thead>
<tr>
<th>How many students whose first experience of TAFE was NOT in 2005 went on to complete courses after 2005?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion status</td>
</tr>
<tr>
<td>enrolled</td>
</tr>
</tbody>
</table>

| ANY COURSE | 339 | 290 | 86% | 44% |

**Qualification courses:**

- **Certificate I:**
  - Enrolled: 16
  - Completed: 8
  - % of those enrolled: 50%
  - % of students who completed 946 in 2005: 1%

- **Certificate II:**
  - Enrolled: 51
  - Completed: 22
  - % of those enrolled: 43%
  - % of students who completed 946 in 2005: 3%

- **Certificate III:**
  - Enrolled: 57
  - Completed: 34
  - % of those enrolled: 60%
  - % of students who completed 946 in 2005: 5%

- **Certificate IV:**
  - Enrolled: 63
  - Completed: 46
  - % of those enrolled: 73%
  - % of students who completed 946 in 2005: 7%

- **Certificate IV 1011:**
  - Enrolled: 30
  - Completed: 27
  - % of those enrolled: 90%
  - % of students who completed 946 in 2005: 4%

- **Diploma:**
  - Enrolled: 16
  - Completed: 7
  - % of those enrolled: 44%
  - % of students who completed 946 in 2005: 1%

- **Cert II, Cert III, Cert IV or Dip:**
  - Enrolled: 147
  - Completed: 94
  - % of those enrolled: 64%
  - % of students who completed 946 in 2005: 14%

- **Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011:**
  - Enrolled: 122
  - Completed: 70
  - % of those enrolled: 57%
  - % of students who completed 946 in 2005: 11%

- **Cert II, Cert III or Cert IV:**
  - Enrolled: 140
  - Completed: 90
  - % of those enrolled: 64%
  - % of students who completed 946 in 2005: 14%

- **Cert II, Cert III or Cert IV excluding Cert IV 1011:**
  - Enrolled: 115
  - Completed: 66
  - % of those enrolled: 57%
  - % of students who completed 946 in 2005: 10%

- **Ag Cert II, Cert III, Cert IV or Dip:**
  - Enrolled: 26
  - Completed: 18
  - % of those enrolled: 69%
  - % of students who completed 946 in 2005: 3%

**Non qualification courses:**

- **SOA 946:**
  - Enrolled: 105
  - Completed: 85
  - % of those enrolled: 81%
  - % of students who completed 946 in 2005: 13%

- **All SOAs:**
  - Enrolled: 189
  - Completed: 154
  - % of those enrolled: 81%
  - % of students who completed 946 in 2005: 23%

- **CRS IN:**
  - Enrolled: 99
  - Completed: 85
  - % of those enrolled: 86%
  - % of students who completed 946 in 2005: 13%

- **Other:**
  - Enrolled: 79
  - Completed: 70
  - % of those enrolled: 89%
  - % of students who completed 946 in 2005: 17%

**How many students whose first experience of TAFE was NOT in 2005 did NOT further engage with TAFE?**

| No further re-engagement | 318 | 48% of students whose first experience was NOT in 2005 |

**How many students whose first experience of TAFE was NOT in 2005 concurrently undertook**

<table>
<thead>
<tr>
<th>Completion status</th>
<th>Completion rate as: % of those enrolled</th>
<th>% of students who completed 946 in 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>enrolled</td>
<td>completed</td>
<td></td>
</tr>
</tbody>
</table>

- **Cert II, Cert III, Cert IV or Dip:**
  - Enrolled: 101
  - Completed: 53
  - % of those enrolled: 52%
  - % of students who completed 946 in 2005: 23%

- **Cert II, Cert III, Cert IV or Dip excluding Cert IV 1011:**
  - Enrolled: 84
  - Completed: 36
  - % of those enrolled: 43%
  - % of students who completed 946 in 2005: 19%

- **Ag Cert II, Cert III, Cert IV or Dip:**
  - Enrolled: 26
  - Completed: 12
  - % of those enrolled: 46%
  - % of students who completed 946 in 2005: 6%
<table>
<thead>
<tr>
<th>By age bracket</th>
<th>25 years &amp; under</th>
<th>26 - 35 years</th>
<th>36 - 45 years</th>
<th>46 - 55 years</th>
<th>Over 55 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commenced course 2195</td>
<td>422</td>
<td>143</td>
<td>72</td>
<td>98</td>
<td>78</td>
</tr>
<tr>
<td>Completed an SOA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>158</td>
<td>45</td>
<td>21</td>
<td>43</td>
<td>35</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>25</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>47</td>
<td>16</td>
<td>6</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Completed 946 SOA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>60</td>
<td>18</td>
<td>7</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>14</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>24</td>
<td>9</td>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Completed Cert III 797</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>45</td>
<td>19</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Completed Cert IV 2483</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>61</td>
<td>31</td>
<td>9</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Completed CRS IN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>60</td>
<td>20</td>
<td>8</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>16</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Completed CRS IN or SOA PRIOR to commencing 2195</td>
<td>190</td>
<td>59</td>
<td>26</td>
<td>51</td>
<td>40</td>
</tr>
<tr>
<td>Completed ANY COURSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to commencing 2195</td>
<td>292</td>
<td>99</td>
<td>54</td>
<td>70</td>
<td>51</td>
</tr>
<tr>
<td>Post commencing 2195</td>
<td>67</td>
<td>22</td>
<td>14</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Concurrent to commencing 2195</td>
<td>92</td>
<td>31</td>
<td>11</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td>DID NOT ENROL IN ANY COURSE PRIOR to commencing 2195</td>
<td>85</td>
<td>31</td>
<td>9</td>
<td>21</td>
<td>18</td>
</tr>
</tbody>
</table>
Appendix C

Students of the Diploma in Agriculture between 2004 and 2011 - Letter of invitation to focus group participants

Date
Address

RE: Invite to participate in a research study focus group on **Day/Month 2012** between **Time** at TAFE NSW **Centre Name**

Dear **Name**

TAFE NSW is carrying out a research project to determine how TAFE training delivery in short courses and full qualifications is meeting training needs in the agricultural sector. This research is funded by the National Centre for Vocational Education Research (NCVER).

The research team is contacting you to ask for your assistance. We would like to get a first hand view of your reasons for enrolling in a Rural Production Studies short course in 2003 or a Diploma in Agriculture qualification course in the years 2004 to 2010, how well it met your needs and the skill development needs of the farm business you are associated with.

You would be part of a focus group that will run for approximately one and a half to two hours on the afternoon of **Day/Month 2012** at TAFE NSW Primary Industries Centre North Wagga. Light refreshments will be provided. A researcher from Western Research Institute may contact you regarding your participation in the focus group.

To participate in the focus group please contact **Danielle Kanshaw**
Western Research Institute
Phone (02) 6336 4433 Text 0426 319 485 Email d kanshaw@csu.edu.au
by Friday 9th March.

TAFE NSW has engaged independent researchers from the Western Research Institute to conduct the focus groups to obtain your views. Our third partner is Kaye Bowman Consulting. All information that could identify you in the project will be kept confidential unless you agree to have it published.

Your participation in this session will assist us to determine how to better service the training needs of rural people and rural businesses.

For details of the location and directions to the TAFE NSW **Centre Name**
please contact
**Name** Head Teacher, Agriculture Department
**Address**
Ph: (02) 6939 5040

Yours sincerely

**John Mills**
Manager, Industry Team and Research Team Leader
TAFE Training and Education Support, Industry Skills Unit - Orange

TAFE Training and Education Support, Industry Skills Unit - Orange
Level 1, 50-52 McNamara Street (PO Box 946), Orange NSW 2800
Telephone: 61 2 6303 8000 Facsimile: 61 2 6303 6882
https://www.tafensw.edu.au
Participant Interview Template:

Student: xxxxxxxx  
Location: xxxxxx  
Phone: xxxxxx  
Date: xx/xx/xx  
Focus group: xxxxxxxx

Hi, my name is xxxxxxx. I'm calling from the Western Research Institute at CSU in Bathurst, on behalf of TAFENSW regarding some research being conducted into training via skills sets or short courses.

We spoke to you earlier regarding this research. Is this a good time to discuss your experiences? It will take around 20 minutes.

No: Is there another day / time that would be more suitable? (record day / time)
Yes:  
   Thanks.

Please be assured that your responses are completely confidential. Your responses will only be shared with research team members and no individual responses will be able to be identified in the reporting of the research findings. Are you happy to proceed?

You may know skills sets as short courses or short training programs. For the purposes of this interview, TAFE NSW has provided me relevant elements of your training history.

You’ve been selected to take part in this research because xxxxxxxxxxxxxxxxxxx

**Student Training history**

<table>
<thead>
<tr>
<th>Student ID</th>
<th>Date of Birth</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>312644215</td>
<td>12/11/1986</td>
<td>946</td>
<td>SOA</td>
<td>Rural Production Studies</td>
<td>CC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>940</td>
<td>SUA</td>
<td>Rural Production Studies</td>
<td>CC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2006</td>
<td>1011</td>
<td>Wool Classing</td>
<td>CC</td>
</tr>
</tbody>
</table>

Note:  
C = closed NOT complete  
CC = closed and complete
**BACKGROUND**
Firstly, can I just get some background details for the interview.

1. Which TAFENSW Institutes / campuses have you attended?

2. What was your highest completed school level?
   - Year 12 or equivalent
   - Year 11 or equivalent
   - Year 10 or equivalent
   - Year 9 or equivalent
   - Year 8 or below
   - Never attended school

3. What other formal education / training you have completed?
   - Bachelor degree or higher
   - Vocational education provided by an organisation other than TAFE
   - Other

4. How many years prior to commencing your first TAFE course did you last study formally?

5. Of the following categories, which BEST describes your current employment status?
   - Full-time employee
   - Part-time employee
   - Self-employed, not employing others
   - Employer
   - Unemployed - seeking work
   - Approx. how many employed?
6. Could you please briefly outline the MAIN job roles or functions you’ve fulfilled over the last five years including whether you were full time or part time, whether you were self-employed or an employer (does not need to name employers):

<table>
<thead>
<tr>
<th>Description of employment</th>
<th>Employment Status - tick one</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TRAINING EXPERIENCE**

Thank you, now to your experiences with TAFE.

**DO NOT READ OUT:**

Broadly, the research questions we are trying to answer are:

- What role do short courses play in encouraging engagement in further formal vocational education and training? Furthermore, do they become building blocks to qualifications?
- What role do short courses play in workforce skills development and productivity?
- Are they useful post qualification?

**You undertook a xxxxxx in xxxx.**

**SECTION 1 – Purpose of short course, benefits of short course**

<table>
<thead>
<tr>
<th>Why did you undertake this course?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What specific skills were you hoping to gain?</td>
</tr>
</tbody>
</table>
Were there any qualification courses such as Certificate or diploma level courses you could have done to get the same skills?

If YES or DON’T KNOW, continue

What were the MAIN reasons you didn’t enrol in a qualification course at the time?

Was the cost of a full qualification course a consideration when deciding to do the short course?

What appealed to you about doing the short course rather than a full qualification at the time?

If the short course had not been available would you have enrolled in a full qualification? Why / Why not?

If NO, continue

What appealed to you about doing the short course at the time?

What appealed to you about the way the short course was delivered?

If the short course had not been available would you have enrolled in a longer course? Why / why not?

Apart from the specific skills you sought to gain from the short course, were there any other benefits from doing the short course?

Prompt if needed:

For instance, do you think the short course provided a good introduction to a TAFE learning environment?

Having completed the short course, would you feel comfortable taking on higher level TAFE training if need be?

SECTION 2 – workplace productivity

How did the short course you undertook in xxxx change what you were able to perform in the workplace?

Did it change your earning capacity, your ability to progress to higher levels of work, your career mobility? If so, how?
If the respondent is an employer or self-employed:

Did it make your business more productive? If so, how?

SECTION 3 – further engagement with TAFE

You went on to complete a xxxxxx.

<table>
<thead>
<tr>
<th>Was doing a short course a good way to get into formal training? In what ways?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were you able to use your short course results to gain your qualification more quickly?</td>
</tr>
<tr>
<td>Have you completed a short course since completing your qual? For what purpose?</td>
</tr>
</tbody>
</table>

If no engagement beyond short courses:

Now that you’ve completed a couple of short courses, do you think you’d ever take on any more formal qualification training such as Certificate / Diploma level courses? Why / Why not?

OTHER

If there is any mention of having started a course but not completed it, ask why this happened?
What was their initial intention regarding the course?
Did their circumstances change?

CLOSING

That’s all the questions I have for you today. Do you have any final opinions you’d like to offer on your experiences with TAFE?

Thanks for your time. If we need to clarify anything would you mind if we gave you a further quick call?