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Workforce skills development and engagement in training through skill sets

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Science, Research and Tertiary Education**

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NATIONAL VOCATIONAL EDUCATION
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About the research

Workforce skills development and engagement in training through skill sets

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Skill sets are a grouping of one or more competencies below the level of a full qualification that meet a client skills need, such as a licensing or compliance requirement or specific knowledge in an emerging area. They are contained in training packages, which are the mechanism by which learning outcomes are defined in Australia's vocational education and training (VET) system.

A point of debate is the role that skill sets play compared with full qualifications, which are seen as the foundation of the VET system. To throw some light on this issue, John Mills and his colleagues undertook a case study of agrifood students, which investigated the use of skill sets by students enrolled in Rural Production Studies skill sets developed by TAFE NSW and those enrolled in the Diploma of Agriculture.

Key messages

- Licensing and compliance, upgrading skills and gaining specific knowledge in an emerging area are the main reasons for undertaking skill set training.
- In many cases skill sets aided engagement in VET and were used as a stepping stone to the completion of full qualifications, suggesting that skill sets should not be seen as a threat to full qualifications.

Skill sets can be defined in training packages, or developed by individual registered training organisations. The authors see the distinction between the two as an artificial construct and suggest that both should have equal status. They are also critical of the rules associated with skill sets; in particular rules that affect the responsiveness of the VET system, including not allowing for flexibility in the design of skills sets and the process whereby industry skills councils endorse skill sets in training packages.

Tom Karmel
Managing Director, NCVET

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Abstract

There has been some debate over whether skill sets have the capacity to be part of a more flexible skilling solution, one in which vocational education and training (VET) in Australia is enhanced. This proposition is explored using a case study of agrifood students who were enrolled in TAFE NSW Statement of Attainment in Rural Production Studies skill sets in 2005 (1128 students) and those who were enrolled in the Diploma of Agriculture between 2004 and 2010 (422 students). The case study included an analysis of students' training histories, including their commencements, completions and progressions in training, to determine when and how skill sets were used. In-depth structured interviews of a sample of the students were used to investigate their skills development pathways and the roles that skill sets have played.

A recent literature review by the authors indicated that flexibility and responsiveness in VET are critical to meeting changing labour market needs for skills development (Mills et al. 2012). The case study has confirmed the need for flexibility in the structure of skill sets, identifying that there is a wide range of individual skill development needs in any cohort of learners. This research found that licensing and compliance, upgrading skills and gaining specific knowledge in an emerging area are the main reasons for undertaking training utilising skill sets.

A common concern in the literature about training that makes use of skill sets is that it may impact negatively on the completion of whole qualifications. However, this research finds that skill sets in many cases aided engagement in VET and were used as a stepping stone to the completion of full qualifications; they were also used to build additional skills, particularly that broaden and/or deepen the skills and capabilities of already qualified workers.

Introduction

Research purpose

The purpose of this research study was to provide evidence to support or refute claims about the role of skill sets in vocational education and training (VET) in Australia, and in the light of this evidence to consider the implications for the development of a national skill sets policy.

Skill sets are a grouping of one or more competencies below the level of a full qualification that meet a client skills need, such as a licensing or compliance requirement, or specific knowledge in an emerging area.

Research trigger

The project was prompted by Skills Australia's landmark 2011 report, *Skills for prosperity: a roadmap for vocational education and training*. The report integrated a number of stakeholder perspectives on skill sets and concluded that the challenge was: 'to open up the pathways that benefit clients of the sector without creating the perverse impacts that some stakeholders fear' (p.122). Skills Australia called for an evidence base to be established as soon as practicable on skill sets to aid future policy formulation.

At present two types of skill sets are distinguished in Australian VET: skill sets in training packages and skill sets developed by registered training organisations (RTOs). There are no data available on the more recent skill sets in training packages as they have yet to be coded and reported as part of the national VET student enrolment and completions statistics collection. There are also no comprehensive national data available on skill sets developed by registered training organisations. However, TAFE NSW has state-level data on its skill sets for the agrifoods industry and this was utilised to conduct this research study, therefore beginning an evidence base on skill sets training in Australian VET.

Research method

The research study has involved a case study of past practice relating to skill sets training in TAFE NSW for the agrifoods industry, including its impact from the perspective of students, and informed by a literature review. The review outlined the origin of skill sets, the features of the two main types of skill sets that have emerged, the arguments that have been made for and against skill sets and the policy recommendations made by Skills Australia in response (Mills et al. 2012).

The case study was undertaken in two parts. First, an analysis of the training histories of TAFE NSW agrifood students was conducted to determine when skill sets were undertaken as opposed to qualifications training. Secondly, structured interviews were conducted with a subset of TAFE NSW Agrifood students whose training histories had been analysed to collect detailed qualitative information on the reasons they undertook training via skill sets rather than qualifications training, the benefits of doing so, and the outcomes of such training.

The training histories analysis focused on two cohorts of students. The first cohort (of 1128 individuals) comprised students who had enrolled in skill sets in the TAFE NSW Statement of Attainment (SoA) in Rural Production Studies in 2005 (TAFE NSW Course number 946). The second

cohort (of 422 individuals) comprised TAFE NSW students who had enrolled in the Diploma in Agriculture (RTE50103) between 2004 and 2010. The skills development pathways prior to and after completion of the skill sets or diploma respectively were extracted from the TAFE NSW database and analysed for both these cohorts of students.

The training history analysis identified the following two groups of students as useful for interview:

- *Group 1:* students whose first experience of training with TAFE NSW was in the year they completed a skill set from the Statement of Attainment in Rural Production Studies combined with students whose training history with TAFE NSW indicates they have only completed skill sets
- *Group 2:* students who have progressed to complete a qualification (including certificate II, III, IV or a diploma) after completing a skill set from the Statement of Attainment in Rural Production Studies, combined with students who have completed the Diploma in Agriculture between 2004 and 2011 and a skill set prior to or after completion of the diploma.

Students from both groups were interviewed via telephone using a structured interview format. The pool of potential participants for interview was drawn from five TAFE (technical and further education) institutes: Western Institute; Riverina Institute; New England Institute; North Coast Institute; and Hunter Institute. They numbered 329 students and were contacted initially by mail and then followed up with phone calls. From this group, 62 students agreed to participate in structured telephone interviews: 37 belonging to the first group and 25 to the second. Full details of the case study method and findings are located in a separate support document available at <<http://www.ncver.edu.au/publications/2568.html>>.

Research questions

This report integrates the main findings from the literature review and the case study to answer the following research questions:

- Why are skill sets needed in VET, and what policy and practices have emerged based on what evidence?
- What roles do skill sets play in workforce skills development and productivity in the agrifood industry?
- What role do skill sets play in encouraging the engagement of agrifood workers/training participants into formal vocational education and training?
- What roles do skill sets play in encouraging the completion of agrifood VET qualifications?
- What role do skill sets play in meeting agrifood industry needs for post-initial qualification skills development?
- What are the implications of the case study findings for national skill sets policy and practice?

The next section considers the first question. The remainder of the questions are addressed in the case study. The last question is the focus of the final section.

Skill sets in Australian VET

This chapter provides an overview of skill sets in Australian VET to provide context for the case study presented in the next chapter. First, skill sets are defined and the two types of skill sets used in VET in Australia are contrasted. Following this, claims that have been made about skill sets are summarised and the latest national policy recommendations outlined.

What are skill sets?

The VET system in Australia uses units of competency as its basic building blocks. Each unit of competency has defined learning outcomes (knowledge, skills and their application parameters), which are measurable in their own right, but which also contribute to larger education outcomes. When units of competency are combined into an interrelated set below the level of a full qualification, they are now commonly referred to as 'skill sets'. Skill sets enable performance of job tasks or functions. By comparison, whole qualifications produce learning outcomes that enable performance of a whole VET occupation. The Australian VET system began to use units of competency as its basic building blocks in the late 1980s, and these were incorporated into the design of a national VET system, over and above the state-based systems, in the early 1990s. The way the national VET system was created has led to the current situation of two types of skill sets being distinguished in VET.

Key features of the current two skill sets types

The national VET system was created to achieve a highly market-oriented system whose intention was to improve the productivity and competitiveness of the Australian economy. To achieve this, national industry bodies for VET (industry skill councils) were established to provide advice on workforce skills development needs. Their role subsequently evolved as they took the lead on the development of a new training product, 'the training package'. These packages are made up of units of competency, which are based on the performance standards for job roles and tasks expected in the workplace; they specify rules for combining the units to achieve occupation-level learning outcomes and a VET qualification aligned to the Australian Qualifications Framework (AQF).

When training packages were fully implemented across all industry sectors with VET occupations from 1997, they were expected to replace the nationally accredited, competency-based courses that registered training organisations had developed previously, but not entirely. Some nationally accredited courses were expected to remain, as required, as a complement to training packages in order to address the requirements of industry, enterprises and the community for those skill needs not covered in nationally endorsed training packages (Australian Quality Training Framework 2007) and this did occur. Participation in national training package qualifications increased almost threefold between 2000 and 2008, while participation in nationally accredited courses decreased dramatically, with this pattern repeated across all states and territories. The vast majority of all remaining nationally accredited courses, about 80% in 2008, are provided by public TAFE institutes (Misko 2010).

It is the dual national training product design framework of VET that has led to the two major types of skill sets currently being recognised: skill sets developed by registered training organisations and skill sets combined in training packages. The key features of the two types are summarised in table 1. They differ in several ways.

Table 1 Key features of the two types of skill sets in Australian VET

| Feature | RTO-developed skill set | Training package skill set |
|----------------------|--|---|
| Availability | 1990s | 2009 |
| Purpose | Meet RTO/individual/enterprise-determined needs not met by training packages | Meet a national industry specified: <ul style="list-style-type: none"> ▪ licensing requirement ▪ regulatory requirement ▪ other industry need |
| Composition | Flexible combinations of units of competency from any source that meet client needs. They can include combinations of state-accredited and national units of competency | Predefined core units of competency from training package qualifications; no electives |
| Crossover capability | Training package units of competency have been used in RTO-developed skill sets since their inception | RTO-developed skill sets can be incorporated into training package qualifications as of 2010 |
| Development process | Negotiated between an RTO and enterprise and individual clients, any time | Standard training package review process that shifted from a 3-year cycle to a regular improvement cycle in 2008–09 |
| Recognition | RTO-developed local product Statements of attainment state: <ul style="list-style-type: none"> ▪ the individual has completed specified units from nationally recognised qualification(s)/course(s) ▪ can include additional brief information reflecting an identified purpose | National industry-endorsed product Statements of attainment state: <ul style="list-style-type: none"> ▪ the specific licence or regulatory requirement they meet or other defined industry need |
| Recording/reporting | Some RTOs code and report as a completed statement of attainment | Proposed in national VET statistics forward plan (NCVER 2010) |

Source: Constructed by the authors.

Skill sets have been part of the repertoire of training products of registered training organisations under the Australian Quality Training Framework for many years, albeit not always by this name. Registered training organisations have long worked with their clients to identify combinations of units of competency that meet the needs of individuals, enterprises and industry sectors. These combinations of units have been delivered via short courses and statements of attainment developed and accredited by training organisations using training package units of competency. Both these types of short course structures originally had the flexibility to include elective units. The other main approach was by partial enrolment in full qualifications.

Skill sets in training packages are a more recent phenomenon. Their inclusion stems from a decision taken in 2006 by the National Quality Council (NQC)¹ and the Council of Australian Governments (COAG) that was based on a recommendation of the High Level Review of Training Packages carried out in 2004:

If training packages are to continue to serve the needs of both industry and learners, the status of full qualifications must not be eroded. At the same time, employers and individuals are increasingly valuing ‘skill sets’: discrete but cohesive components of learning, and we recommend steps to give them greater recognition, and at the same time give more weight to skill sets.

(Schofield & McDonald 2004, p.5)

Subsequently, principles and protocols for skill sets in training packages were developed (Department of Education, Science and Training 2007). Each national industry skills council began work to meet the

¹ The National Quality Council (NQC) was established in December 2005 and replaced the former National Training Quality Council (NTQC) as a Committee of the Ministerial Council for Vocational and Technical Education to oversee operation of the National Skills Framework, including training packages, Australian Quality Training Framework standards and other quality assurance arrangements.

specified milestone by the Council of Australian Governments that skill sets, as they were reviewed and updated from 2009, become a formal part of the design of VET qualifications in training packages.

The status assigned to the two types of skill sets currently differs. Skill sets in training packages are referred to as industry-endorsed and deemed of national value in their own right. They have a formal definition and are defined as:

Those single units or combinations of units which link to a licence or regulatory requirement, or defined industry need. (National Quality Council 2006)

Skill sets developed by registered training organisations are referred to as endorsed skill sets of local value. 'Of local value' means of value to the clients of the training organisation, which these days may not be local. Clients of registered training organisations now extend across borders and can include enterprises that operate nationally. A working definition of skill sets developed by registered training organisations is:

A grouping of one or more units of competency, fewer than those needed to achieve a qualification, that meet the skills development needs of an individual in an enterprise or industry sector. (Mills et al. 2012, p.22)

These two types of skill sets differ in their composition. Skill sets developed by registered training organisations have been highly flexible constructs, containing any units from any qualification within training packages or other nationally or state-accredited qualifications, with the aim of meeting the skills development needs of an individual, enterprise or industry client. Training package skill sets on the other hand are prescribed and made up of units originating only from training package qualifications.

The two types of skill sets differ in their development process. Registered training organisations skill sets are developed through negotiations with their clients at any time and with the minimum of administrative delay, while their counterparts from training packages are developed through the training package continuous-improvement process, which has longer lead times.

In relation to reporting and recording, there has long been a recognition and certification tool for skill sets in VET, the statement of attainment:

Through the use of the statements of attainment the AQF acknowledges that completion of accredited units contribute to the progression towards achievement of an individuals' lifelong learning goals ... [but] The statement of attainment must be in a form that ensures it cannot be mistaken for a testamur for a full AQF qualification. (AQF Council 2011, pp.71, 72)

Some registered training organisations have coded and reported their training in skill sets as enrolments and completions in statements of attainment, in accordance with long-term VET policy. The recommendation of the High Level Review of Training Packages was that skill sets in training packages also be recognised through a statement of attainment. However, it has been decided that skill sets in training packages will be coded for national reporting as part of the forward plan for the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) in a few years time (NCVER 2010).

Why skill sets?

Skill sets have in recent times been recognised as having a role in VET in Australia by providing flexibility and responsiveness to changing workforce skills needs.

The labour market is constantly changing and influencing skills development needs. Misko (2010) has researched the changing skill demands in VET occupations. The consistent message from industry was that the core basic skills of most VET occupations have not changed in any significant way over the last 20 years. It is the environment in which skills are applied that has changed. Changes are occurring at the job function level – not at the whole occupation level – as a result of general advances in information technology, design technologies and telecommunications; changes in regulatory frameworks, such as in workplace and occupational health and safety, specific industry regulations, taxation and goods and services tax legislation; and through advances in work organisation and practice as part of the drive for increased productivity and accountability.

Misko (2010) has shown that flexibility and responsiveness in VET is being achieved particularly through skill sets. Her content analysis of skill sets in training packages as of early September 2009 indicates which skill sets have been developed to meet a licence or regulatory requirement or an emerging skill need, as described above. Misko’s content analysis of 200 randomly selected, nationally accredited courses for 2008 found that the topics covered included, for example, environmental sustainability, health and monitoring techniques and digital media. A small number of courses were also aimed at preparation for licences or permits to meet state-specific occupational health and safety requirements. Misko concluded that accredited courses are being offered in areas where there are skills gaps and emerging skills issues not well covered in training packages or to the satisfaction of industry, government or community stakeholders.

The rapid increase in the numbers of skill sets in training packages indicates strong industry support for them as a vehicle for meeting changing workforce skills development needs. Since 2009 there has been a proliferation of skill sets in training packages (table 2).

Table 2 Number of skill sets developed across all training packages, 2006–12

| Date | 2006 | September 2009 | August 2010 | June 2012 |
|--|---------------------------------------|----------------|-------------|-----------|
| Number of training package skill sets | Assume zero, no definitive data found | 178 | 323 | 924 |
| Number of training package skill sets in agrifood sector | Zero | 26 | 26 | 116 |

Sources: Misko (2010); Australian Government training website.

As for individuals’ level of support for skill sets, the only available quantitative evidence shows that many VET students complete only some units of competencies from a VET qualification. This fact is commonly cited as a strong indicator that individuals are also only looking for skill sets and not whole qualifications. This may be the case since, in VET in some Australian jurisdictions, learners can only enrol in whole qualifications even when they simply want a single, or only some, unit(s) of competency. However, there are many potential reasons for non-completion of a full qualification.

Who should have access to skill sets?

While it is agreed that skill sets have the capacity to be part of the more flexible skilling solutions required in VET, it is not commonly agreed who should have access to skill sets training. Industry skills councils and representatives of other VET stakeholders provided a variety of perspectives to Skills Australia (2010b, 2011). In particular, the notion of skill sets as a ‘building block’ approach to an initial VET qualification is less well supported than the notion of skill sets as a useful adjunct to qualifications already gained.

Arguments made for skill sets as an initial training option include that these provide the opportunity to build up confidence among those who may be daunted by the prospect of undertaking the full load of formal training associated with a qualification. This argument has been made particularly in relation to the disadvantaged and those returning to education and training:

VET policy should acknowledge that the needs of such learners are often best addressed incrementally through the development of skill sets and the provision of intermediate pathways to full qualifications. (TAFE NSW Social Inclusion Unit submission to Skills Australia 2010b)

Skill sets have an important function as a means of recognising skills acquisition and serving as a stepping stone to further learning for disadvantaged learners.

(National VET Equity Advisory Council submission to Skills Australia 2010b)

Another argument for skill sets as an initial training option has been presented in relation to the resources industries: 'because mining and other resources industry projects often don't run the full time taken to obtain a qualification, undertaking skill sets enables employees the opportunity to move on to the next project or mine site with a stepping stone towards a qualification' (Lista Consulting 2010, pp.8–9). However, there is currently no quantitative evidence to support or refute the contention that skill sets are being used as stepping stones to a qualification by individuals.

A third argument for entry-level access to skill sets is to provide an opportunity to engage more enterprises and their employees in nationally recognised training. In particular, engagement through skill sets may overcome some barriers to training for small and medium-sized enterprises. In the past, time sensitivities, arduous paperwork requirements or a qualification that exceeded requirements may have meant that enterprises were reluctant to undertake training. There is research evidence that an incremental approach may work in gaining commitment from smaller enterprises to nationally accredited training (Cully 2005; Smith et al. 2005). It shows them that the competencies they most value are available in nationally accredited training; this initial engagement then extends into other recognised competencies and, finally, recognised competencies and qualifications become embedded into the organisation's human resource management system (Cully 2005; Smith et al. 2005).

The primary concern about skill sets as an initial entry point to formal VET is that they may confine some individuals to narrow job roles and reduce their labour mobility. An individual might stop training upon completion of a skills set to realise the immediate benefits of a narrow job role. Skill sets provision may result in individuals with limited adaptability and mobility and high vulnerability in the labour market, as they are unable to perform a full occupation role. Quantitative studies consistently show that individuals with qualifications are more likely to be employed, working full-time and have higher earnings than those without qualifications (Stanwick 2005; Karmel & Nguyen 2007). The related concern is that unlimited access to skill sets training might erode the value of full qualifications and, in time, reduce the quantity of fully qualified occupation-level workers required to sustain industries and Australia's economic competitiveness. The unmet demand for qualified VET workers remains large, particularly from certificate III level and upwards (Skills Australia 2011).

By comparison, skill sets use among the already qualified has considerable support. In this instance, skill sets are believed to enable workers to build on their existing qualifications to keep their skills up to date or to develop skills in a new area without their needing to complete a full qualification, enabling them to progress in an industry, to move between different sectors in an industry or into a new industry. Many industries are focusing on the use of skill sets for the already qualified; for example:

- The community services industry has identified a large number and wide range of skill sets in its training package to enable a worker with an initial qualification to move within its large internal

labour market sectors. Some skill sets build workforce capacity by expanding worker capability in a lateral fashion through the development of skills in new areas, such as disability, aged care and social housing. This training package also includes skill sets that build the additional skills and capabilities of existing workers with qualifications, allowing them to progress in their careers, including to service delivery and management roles (Community Services and Health CHC08 Training Package, version 3 March 2011).

- Nursery and garden enterprises include many already qualified workers looking for quick top-up training in areas such as human resources, sales and marketing, business management and finance. Emerging skill set needs have also been identified in supply chain management (two units) and in bio-security, where there are a number of units to be cherry-picked across different training packages (Lista Consulting 2010, p.8).

Latest recommendations on skill sets

Skill sets have their supporters and opponents and those who give qualified support, for the reasons outlined above. Skills Australia's considered view of the different perspectives was that:

On balance we consider that there is merit to the argument that skill sets are capable of meeting a range of needs, including as a pathway to qualifications, as a tool for workforce development in enterprises, and as a mechanism to provide skill top-ups, particularly for existing workers.

(Skills Australia 2011, p.122)

Skills Australia made recommendations on the future use of skill sets as outlined in box 1, maintaining the focus on whole qualifications in VET, while giving greater weight to skill sets in training packages (but not skill sets developed by registered training organisations), with the strong proviso that an evidence base on skill sets be developed to inform future policy.

Box 1 Skill sets: recommendations of Skills Australia (2011)

Recommendations 19 (d) and (e)

- That a proportion of public funding in both the enterprise-responsive and individual-based funding streams for skill set delivery be made available within the parameters below
- That the impact of skill set delivery on enterprise workforce development and on achieving pathways to higher-level learning and work be assessed three years after the commencement of these funding arrangements (p.17)

Parameters for public funding of skill sets

- Only for training package identified skill sets at this stage and subject to their identification by a national code to enable tracking of uptake and impacts
- Only for learners without a qualification if there is a guaranteed pathway to one
- Industry skills councils to provide a mapping of the pathways from each identified skill set to relevant qualification
- Will not extinguish entitlement to public funding for a qualification
- Stronger quality arrangements for RTOs to minimise the potential for a proliferation of providers delivering what they might see as quick and cheap offerings
- RTOs to demonstrate a track record of achieving pathways from skill sets to higher-level learning for their learner cohorts for a period of at least two years (p.123).

Summary

Training in short courses (skill sets) has been a feature of the Australian VET system for many years, but the practice has not been the focus of attention until recently. Due to a lack of evidence there are a number of perspectives on skill sets and their contribution to the VET system that cannot be confirmed or refuted. Past practice with skill sets developed by registered training organisations is the only possible data source for such an analysis, since data on skill sets in training packages are not yet available.

Skill sets in the agrifoods industry

This chapter presents a case study of the learning and work pathways of students who have participated in skill sets training developed by TAFE NSW and the agrifoods industry, in contrast with other students who have enrolled in TAFE NSW agricultural qualifications. The case study investigated the roles that skill sets have played in:

- encouraging engagement of agrifood workers/new entrants into formal VET
- acting as a building block to agrifood VET qualifications and their completion
- meeting agrifood industry needs for post-initial qualification skills development
- developing workforce skills and productivity in agrifood industries.

Context

The agrifoods industry is a strong supporter of skill sets delivery in addition to qualifications. In its submission to Skills Australia, Agrifood Skills Australia (Skills Australia 2010b, p.8) argued:

While significant sections of the agrifood industry support full qualifications as a means of skilling their workforce and individuals use them as a means of gaining employment in a sector of their choice, many enterprises need their workers trained in the skills required to do the job at hand. Many individuals in these workplaces want no more than the training that will help them get a job, keep it, or will be a means of progression.

Skill sets appeal in many parts of the agrifood sector, where there is no culture and history of credentials, and no economic imperative, since there is no credential barrier to entry to the industry. There is, however, a culture of lifelong learning through a whole range of extension programs that are short and sharp and often seen to fit immediate and practical needs. Skill sets offer a timely and appropriate response to this need, with many in the industry beginning to see the benefits that VET can provide, in terms of its structure and the way in which outcomes and skills can be measured (Agrifood Skills Australia 2011).

Agrifoods Skills Australia suggests that a culture of incremental or lifelong learning extends to all of regional or non-metropolitan Australia:

The culture of incremental learning is prevalent across Regional Australia – not just agrifood – and follows a clear and significant pattern. Course completion rates across all industries decline with increasing remoteness: with students in major cities more than twice as likely to complete as those students living in remote or very remote areas. Throughout consultation for the 2011 Environmental Scan, enterprises and industry bodies alike have continued their calls for the proactive and systemic funding and delivery of Skill Sets, individual units of competency and full qualifications. (Agrifoods submission to Skills Australia 2011)

A recent evidence-gathering report on the training requirements of the agrifood industries provides many stories on the use being made of skill sets in the sector and in other regional-based industries (Lista Consulting 2010). One of these mentions a skill set from the Statement of Attainment in Rural Production Studies, which is the focus of this study: many individuals who commenced a skill set from this course were able to progress through certificate II, III and IV once they had gained positive experiences of learning in the TAFE NSW environment.

It is in this context that the case study investigated the training pathways of students who had completed skills sets and/or whole qualifications.

TAFE NSW-designed skill sets for the agrifoods industry

For the purpose of this study skill sets include both statements of attainment and state-accredited courses.

A statement of attainment (SoA) is made up of a group of one or more training package units of competency but fewer than for a full qualification. The Statement of Attainment in Rural Production Studies was developed by TAFE NSW and first accredited in July 2003. This statement of attainment enabled students to build groupings of units of competency (skill sets) to develop knowledge and skills in specific areas of agriculture. It was 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. Furthermore, it provided a mechanism for recording the initial intent of the student: to complete a skill set rather than a full qualification. The skill set could still lead to a range of qualifications if the student changed their intentions.

The majority of the units in the statement of attainment structure come from the RTE03 Rural Production Training Package. Other training packages provide units which support training in the rural production sector, for example: FPI99 Forest and Forest Products Industry; RTD02 Conservation and Land Management; WRR02 Retail; RTF03 Amenity Horticulture; TDT02 Transport and Distribution; and BSB01 Business Services. The completion requirement is the successful completion of at least one unit of competency.

An 'accredited course in' (CRS IN) is a short course which includes state-accredited units of competency or a combination of state and nationally accredited units of competency but fewer than those required for a qualification. Examples of accredited courses completed in the training history of both groups of students in this research include the Course in SmartTrain Chemical Application, the Course in Sustainable Native Forests and the Course in Holistic Management.

Diploma in Agriculture

The Diploma in Agriculture (RTE 50103; TAFE course number 2195) is from the RTE03 Rural Production Training Package, which was endorsed in 2003. The qualification is designed to provide the skills and knowledge necessary for performing the duties of a manager on properties engaged in agriculture. Students are required to successfully complete ten units of competency within the packaging rules of the qualification to complete the Diploma in Agriculture. This qualification was chosen because it was a higher-level training package general agriculture qualification and would constitute a logical pathway from the Statement of Attainment in Rural Production Studies, which included a wide range of RTE03 units of competency in its structure. In addition, there were sufficient enrolments in this course to provide a suitable cohort for the study.

The case study

The case study has been developed from:

- an examination of the types of skill sets undertaken through the Statement of Attainment in Rural Production Studies

- an examination of the training pathways of students who were enrolled in a skill set from the Statement of Attainment in Rural Production Studies in 2005 (1128 students) and those who were enrolled in the Diploma of Agriculture between 2004 and 2010 (422 students)
- in-depth structured interviews with a subset of these students (62 in total) to collect detailed qualitative information on the reasons they undertook training via skill sets, the benefits of doing so, and the outcomes of such training.

Types of skill sets undertaken

An analysis of the 2005 completion data for the statement of attainment was undertaken to uncover the range and types of skill sets that students had completed. To guide the allocation of an AQF level to the various skill sets, the authors used the rules shown in table 3.

Table 3 Rules for assigning AQF levels to skill sets

| Rules for allocating skill set levels | Assigned AQF level |
|---|---|
| For skill sets with three or less units of competency | the highest level unit |
| For skill sets with four to six units of competency | the lowest level of the two highest level units |
| For skill sets with seven to 12 units of competency | the lowest level of the three highest level units |
| For skill sets with more than 12 units of competency | the lowest level of the four highest level units |

The statement of attainment completion data revealed significant engagement in skill sets at AQF3 level and above, shown in table 4. This indicates a strong focus on skills to improve workplace performance or job prospects, with AQF3 being accepted as the level required for a 'tradesman' or autonomous worker.

Table 4 Skill sets used by AQF level

| | AQF1 | AQF2 | AQF3 | AQF4 | AQF5 | AQF6 | Total |
|----------------------|------|------|------|------|------|------|-------|
| Number of skill sets | 3 | 69 | 156 | 53 | 9 | 2 | 292 |

While many skill sets contained units from one AQF level, there were also many examples where participants had packaged skills across levels. This flexibility allows engagement with training at the required operational level, while building a specific skill area that may be missing in an integrated, flexible and responsive manner.

Table 5 Top five skill sets completed in the Statement of Attainment in Rural Production Studies in 2005 by student numbers

| Job function | No. of units | AQF range | Allocated AQF level | Students |
|------------------------|--------------|-----------|---------------------|----------|
| Work health and safety | 1 | 4 | 4 | 99 |
| Land conservation | 7 | 2 to 3 | 3 | 95 |
| Quality assurance | 1 | 4 | 4 | 89 |
| Wool classing | 2 | 4 | 4 | 79 |
| Chemical application | 5 | 1 to 3 | 3 | 55 |

The analysis indicates how the practice established around skill set usage has strongly supported the need for flexibility in skill set structures:

- 292 different skill sets (discrete combinations of nationally accredited units ‘packaged’ by participants to meet their training needs)
- 27 job functions including one ‘not specified’ identified.

Three out of the top five completed skill sets were designed to meet compliance training needs.

- Two chemical compliance skill sets appear in the top 15 skill sets completed, demonstrating 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.
- 85% of students completed skill sets at AQF3 level and above and 39% of students completed skill sets at AQF4 level and above.
- 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, as shown in the training history analysis.

Currently, the approach to training package skill sets does not allow for this level of flexibility or responsiveness.

Training pathways uncovered

A summary of the training pathways of the Statement of Attainment in Rural Production Studies cohort is shown in figure 1. In total, 1098 students completed the statement of attainment in 2005, from the 1128 who enrolled. The statement of attainment had engaged students in skill sets training from across the age spectrum:

- 21% of students who completed the statement of attainment in 2005 were aged 25 years and under
- 18% were aged 26–35 years
- 23% were aged 36–45 years
- 21% were aged 46–55 years
- 17% were over 55 years of age.

The key feature of the training pathways is the significant proportion of students who went on to undertake a full qualification or additional skill set training. Of the students who enrolled in further TAFE training, most were from the younger age bracket (25 years and under) or from the prime working-age bracket (26–45 years). Those from older age brackets were less likely to have engaged in further training. The age bracket analysis is shown in table 6.

Table 6 Further engagement in training by age

| Age bracket | Number | % |
|--------------------|--------|----|
| 25 years and under | 151 | 31 |
| 26–35 years | 80 | 16 |
| 36–45 years | 105 | 22 |
| 46–55 years | 90 | 18 |
| Over 55 years | 61 | 13 |

A summary of the training pathways of the diploma cohort is shown in figure 2. For the diploma cohort, the key features were the use of skill sets as a pathway to completion of the diploma qualification and the use of skill sets following the diploma qualification to meet ongoing workforce skills training needs. In total, 422 students had enrolled in the Diploma in Agriculture (RTE 50103; TAFE course number 2195) between 2004 and 2010. Overall, between 2004 and 2010, 278 students (66%) completed this qualification, 19% did not complete, while 15% were still studying at the time of this research.

The findings as they relate to the role of skill sets as an engagement mechanism, a stepping stone to a qualification and as an adjunct to a qualification, are outlined below.

Figure 1 Summary of the training pathways of students who enrolled in NSW TAFE Statement of Attainment in Rural Production Studies skill sets, 2005

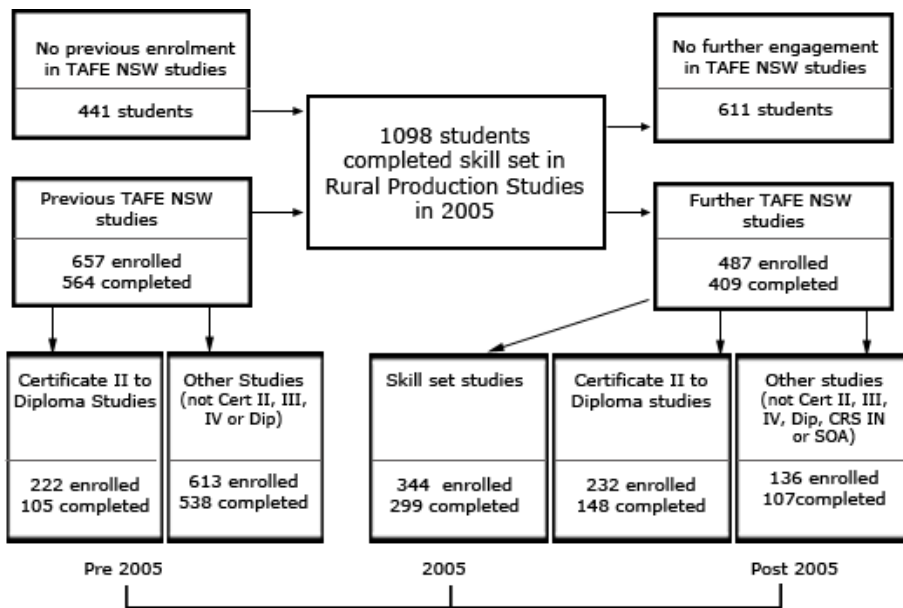
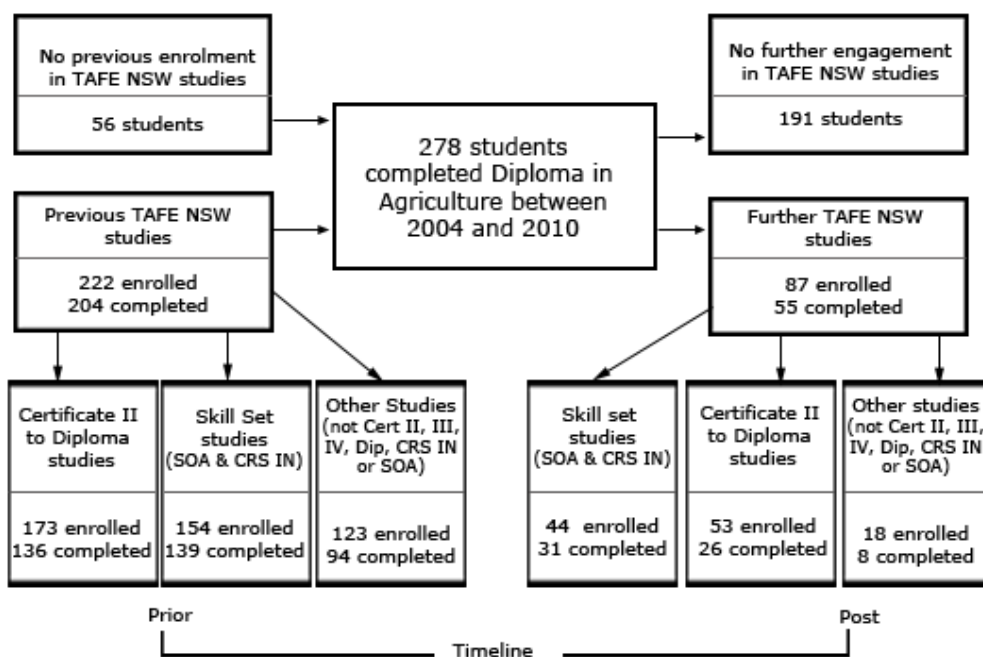


Figure 2 Summary of training pathways of students enrolled in the Diploma of Agriculture, 2004–10



Skill sets as an engagement mechanism with formal VET

An examination of the age of the students in the statement of attainment cohort found that skill set training was undertaken by students across the age spectrum and was a common entry point into the TAFE educational environment. Alongside this, the analysis of statement of attainment student training pathways confirms the role played by skill set training in engaging students with formal VET training:

- 487 students (44% of those who completed a skill set from the Statement of Attainment in Rural Production Studies in 2005) engaged in further training with TAFE NSW in the period 2005 to 2010. 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.
 - 344 students enrolled in a skill set course in the years that followed.
- For 441 students (40% of those who completed a skill set from the Statement of Attainment in Rural Production Studies in 2005), their enrolment in the skill set in 2005 was their first engagement with the TAFE NSW system:
 - 148 (34%) of these students went on to enrol in further training.
 - 85 (19%) of these students went on to enrol in a certificate II, III, IV or diploma qualifications.

Skill sets as a stepping stone to a qualification

The analysis of training pathways for both the statement of attainment and diploma students supports the value of skill sets in encouraging completion of qualifications. The analysis of the statement of attainment cohort found that:

- 232 students (21% of the students who completed the Statement of Attainment in Rural Production Studies in 2005) enrolled in a range of qualifications at certificate II, certificate III, certificate IV (including Certificate IV in Wool Classing) or diploma level in the years that followed, with an aggregate completion rate of 64%:
 - 32 of the 232 students enrolled in a certificate II, certificate III, certificate IV or diploma qualification in agriculture in the years that followed, with a completion rate of 69%.
 - 18 of the 232 students enrolled in diploma qualifications, with a completion rate of 45%.
- Another subgroup within the statement of attainment group had participated in a formalised 'building blocks' approach to completing the Certificate IV in Wool Classing organised by TAFE NSW. The completion rate for the Certificate IV in Wool Classing for this subgroup was 88%.

The analysis of the diploma cohort found that:

- Half of all students who completed the Diploma in Agriculture completed a skill set prior to completion of the diploma.
- Just over two-fifths (41%) of students who completed the Diploma in Agriculture completed a statement of attainment prior to completion of the diploma, while close to one-fifth (18%) had successfully completed a Statement of Attainment in Rural Production Studies prior to completion of the diploma.

Skill sets as an adjunct to qualifications held

An analysis of the training pathways for statement of attainment and diploma students found that:

- 10% of the students who had completed the statement of attainment in 2005 had previously completed a qualification (certificate II, certificate III, certificate IV or diploma).
- 11% of the students who completed the Diploma in Agriculture between 2004 and 2010 completed a skill set (statement of attainment or state-accredited course) subsequently.

The analysis of the types of skill sets undertaken by the statement of attainment 2005 cohort found that 39% completed skill sets at AQF level 4 and above. Three of the four most popular skill sets completed were at AQF level 4 and included: implement and monitor quality assurance procedures, implement and monitor an enterprise OHS program, and determine wool classing strategies and class wool for specialty markets. These types of skill sets are associated with supervisory, planning, and management skills, which are needed after certificate III level qualifications (table 5).

Chemical use skill sets: an example

The comparison provided in table 7 illustrates a need for flexible skill sets to meet current legislative and industry requirements. In this example, one flexible skill set with a core and elective group has been replaced by a series of five (one training package and four developed by registered training organisations) skill sets.

While the situation outlined in the example given for chemical skill sets should improve as national harmonisation and the introduction of nationally uniform licensing across Australia becomes a reality, the underlying problem of slow response time and inflexibility in packaging remains.

Table 7 Chemical use skill sets: past practice verses current policy

| Previously available flexible chemical skill set | Current National Training Package Skill Set | Current series of RTO-developed skill sets to meet the range of workforce development needs | | | |
|--|--|--|---|---|---|
| Course in SmartTrain – Chemical Application (91186NSW) | Agricultural Chemical Skill Set (AHC10) #18950 | Chemical application under supervision #20066 | Chemical application #10102 | Agricultural manual fumigation #10103 | Chemical application and weed control #10104 |
| <p><i>Compulsory units</i></p> <p>NSWTHAZ301A: Manage residues in product</p> <p>RTC2701A: Follow OHS procedures</p> <p>RTC3704A: Prepare and apply chemicals</p> <p>RTC3705A: Transport, handle and store chemicals</p> | <p>AHCCHM303A: Prepare and apply chemicals</p> <p>AHCCHM304A: Transport, handle and store chemicals</p> | <p>AHCCHM101A: Follow basic chemical safety rules</p> <p>AHCCHM201A: Apply chemicals under supervision</p> | <p>AHCCHM201A: Apply chemicals under supervision</p> <p>AHCCHM303A: Prepare and apply chemicals</p> <p>AHCCHM304A: Transport, handle and store chemicals</p> | <p>AHCCHM303A: Prepare and apply chemicals</p> <p>AHCCHM304A: Transport, handle and store chemicals</p> <p>AHCCHM305A: Conduct manual fumigation of vertebrate and invertebrate pests</p> | <p>AHCCHM201A: Apply chemicals under supervision</p> <p>AHCCHM303A: Prepare and apply chemicals</p> <p>AHCCHM304A: Transport, handle and store chemicals</p> <p>AHCPMG301A: Control weeds</p> |
| <p><i>Elective units</i></p> <p>NSWTFUM301A: Manual fumigation for vertebrate and invertebrate pests</p> <p>NSWTHAZ201A: Use hazardous substances safely</p> <p>RTC1701A: Follow basic chemical safety rules</p> <p>RTC2306A: Operate vehicles</p> <p>RTC2309A: Operate tractors</p> <p>RTC2706A: Apply chemicals under supervision</p> <p>RTC3401A: Control weeds</p> | <p>Starting point for chemical application training nationally. Does not allow for specific additional requirements or state-based differences</p> | <p>Satisfies current minimum NSW legislative requirements</p> | <p>Satisfies NSW Pesticide Regulation 2009 for the unsupervised application of pesticides. Where a participant is not competent at level 3, there is an exit point at level 2 that satisfies current NSW legislative requirements</p> | <p>This skill set meets the NSW legislative requirement for training for on-farm manual application of aluminium phosphide</p> | <p>Satisfies the training requirement in Queensland to apply some restricted chemicals or to apply broadacre pesticides to land not owned or occupied</p> |

Student views on training pathways

Interview sample

The interview sample was sought from two student groupings:

- Group 1 students, comprising those whose first experience of training with TAFE NSW was through Statement of Attainment in Rural Production Studies and students who had only completed skill sets.
- Group 2 students, who have completed qualifications as well as skill sets, including the Diploma in Agriculture between 2004 and 2011 and a skill set prior or after completion of the diploma and any qualification after completing the Statement of Attainment in Rural Production Studies.

In total, interviews were conducted with 62 students, 37 of whom belonged to Group 1, and 25 to Group 2.

Interviewee characteristics

Some key characteristics of the 62 participants interviewed are outlined in box 2. Sampling for the interviews was not 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 researched participants. However, the 62 people interviewed were from a variety of backgrounds and the resulting sample does provide a significant contribution to the evidence about student views on workforce development through skill sets.

Box 2 Key characteristics of the 62 participants interviewed

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, while 5% each had completed Year 8 or Year 9. The highest completed TAFE qualification for participants was: 26%, diploma; 27%, certificate IV; 18%, certificate III; 3%, certificate II or certificate I; and 26%, skill sets (statement of attainment/state-accredited course).

Engagement with VET:

Fifteen per cent of participants had enrolled in TAFE while 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 two and ten years break, 15% had between ten and 15 years break and 11% had over 15 years break.

Employment status

Participants were most commonly employed full-time (39%) or self-employed (31%). Ten per cent of participants were employed part-time, while 8% were employers. Thirty-seven per cent of participants identified themselves as farmers, while 10% operated their own businesses not related to farming. Close to one-fifth of participants (19%) were employed on farms, while 34% were employed elsewhere.

Why skill sets?

Data from student interviews supported the results found by Misko (2010). Interviewees identified compliance and licensing, upgrading skills and gaining specific knowledge of an emerging area as the main reasons for undertaking the skill set training developed by registered training organisations.

Skills commonly sought by participants were wool classing; chemicals handling and application; operating machinery including fork-lifts, backhoes, excavators, front end loaders and skid steer loader

(bobcat); and organic farming. 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.

The benefits identified by participants of undertaking skill set training included 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 at a business/farm location.

Commentary highlighting the benefits of skill set training included:

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)

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 [two to four days usually]. (Agricultural sector employee, northern NSW)

I wanted to test my interest to see if I should go down this path for work. (Non-agricultural sector employee, western NSW)

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 region, NSW)

Impact of skill sets training on employment and workforce productivity

Interviewees generally supported the idea that skill set training improved employment opportunities and there was strong support for the positive impact of skill sets on productivity. The small group of employers amongst the students interviewed were overwhelmingly supportive of the value of the skill set training to their operations.

Thirty-six participants provided an opinion on employment impacts, with the majority speaking about positive or potentially positive impacts arising from the training undertaken. Ten participants (of the 36) indicated that the skill set training had exerted 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)

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)

There was strong support amongst interviewees 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. Common reasons for skill set acquisition improving productivity were: removed the need to hire or employ someone else to perform the job function; had an impact on the quality of the product; had an impact on farm decisions; and decision processes improved farm efficiency, improved compliance and improved business/farm safety.

Comments included:

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)

The main job function areas affected by skill set training were wool classing, chemical purchase and application, general farm operations, machinery-related tasks and shearing and sheep management tasks. Other areas affected included tasks related to organic farming, farm management activities and livestock management.

In this research, comments by interviewees who identified themselves as employers were overwhelmingly supportive of the skill set training conducted by TAFE NSW. Comments about the value of skill set training to their operations includes:

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 classroom is not the ideal environment for them. (Grazier, northern NSW)

Skill sets as an engagement mechanism with formal VET

Evidence from the cotton industry (Lista Consulting 2010) is that employers and workers tend to focus on skills and experience rather than on qualifications and the difference between formal and informal learning. Likewise, a common sentiment arising from this study's interviews with TAFE NSW agrifood students was that they 'needed the skills, not the piece of paper'.

Given this outlook on training, providing the key skills required by the training participant via a manageable small 'chunk' is a feature of skill sets that is believed to encourage further engagement. This also provides the learner with a positive experience in a formal training environment and an introduction to the opportunities available.

Supporting this, student interviews revealed considerable satisfaction with the skill set training they had received from TAFE, with many suggesting that these positive experiences could and have led to further enrolments. This was particularly the case for further short courses; however, support for undertaking higher-level qualifications was not as clear-cut, with some participants suggesting that their age and the time commitments required would likely prevent them from undertaking any substantial training course. Some illustrative comments captured were:

Positive learning experiences with TAFE have led to lifelong interest in learning and I've done many courses in other fields. (Farmer, western 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)

Further evidence from the student interviews suggests that skill set training is capturing students who would otherwise be unlikely to undertake formal training. Interviews sought to test the student's awareness of any qualification courses (certificates or diplomas) that would have provided them with the same skills as those developed through the skill set. Of those students 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.

Alongside this, responses to student interviews suggested that skill set training also encouraged engagement from those who had spent some time away from formal education. Just over one-

quarter of interview participants whose first experience of TAFE was through the Statement of Attainment in Rural Production Studies or who had only completed skill sets had enrolled in TAFE after at least a ten-year break from formal study.

Skill sets as a stepping stone to a qualification

Interviewees who had progressed from skill set training to the completion of higher-level qualifications tended to support the notion of skill sets as pathways or building blocks to higher qualifications. Just over one-third of interview 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. Comments included:

Got credit for the chemicals content in the diploma, which enabled me to finish it more quickly.
(Farmer, 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)

Some interviewees talked about their own strategies for explicitly using skill sets as building blocks towards higher-level qualifications. They spoke of enrolment strategies using short courses that would allow the cost or work commitment required to complete the higher-level qualification to take place in stages. Another subgroup in the statement of attainment group had participated in a formalised 'building blocks' approach to completing the Certificate IV in Wool Classing organised by TAFE NSW.

Comments included:

I 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)

Skill sets as an adjunct to qualifications held

Over a third of all interviewees had undertaken skill sets training after completing a qualification. The main reasons for undertaking this training related to regulatory or licensing purposes, particularly in the areas of chemical handling, machinery operations and wool classing. These students also found skill sets a useful way to gain knowledge in an area of specialised or emerging content.

A selection of comments outlining reasons for undertaking skill set training after gaining a 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 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)

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)

Summary

Skill sets meet the flexibility and responsiveness requirements of the agrifoods sector and also suit the training culture of the industry. The data analysis and interviews support the view that skill sets were in many cases not in competition with qualifications but an enabler for engagement in VET, a convenient and cost-effective way of meeting workforce skill training needs and a stepping stone to a qualification. The case study supports the finding of another recent evidence-gathering report on the training requirements of the agrifood industries:

Stakeholders' view of building blocks or skill sets is a much more flexible construct than that of skill sets as nationally defined. Simply making skill sets available as they are currently defined in training packages will not answer the call by industry and individuals. (Lista Consulting 2010, p.4)

New South Wales agrifoods sector students, when given the flexibility to choose their own skill set, came up with 292 different skill sets (discrete combinations of nationally accredited units 'packaged' by participants) to meet their training needs, spanning 27 different job functions, including one 'not specified'. In the agrifood sector skill sets provide a flexible and responsive mechanism for meeting training needs: building additional skills in emerging areas; broadening and/or deepening the skills and capabilities of existing workers and meeting operational and compliance requirements. The interviewees themselves identified compliance and licensing, upgrading skills and gaining specific knowledge of an emerging area as reasons for undertaking the skill set training developed by registered training organisations, particularly when a full qualification was not essential.

The major benefits of skill set training were a small time commitment, the ability to manage work commitments around training and as a means of meeting their individual training needs and accommodating their individual personal and work situations.

Interviewees generally supported the idea that skill set training improved employment opportunities and there was strong support for the positive impact of skill sets on productivity. Likewise, employers interviewed were overwhelmingly supportive of the value of skill set training to their operations.

Skill sets: future directions

Implications for national policy

This chapter considers the implications of the case study findings for national skill sets policy.

As flagged earlier, the national VET policy regarding skill sets is still emerging. Skills Australia had hoped to provide clear advice on future directions with regard to skill sets in its landmark 2011 report but was unable to do so because of a lack of hard evidence. This research study was conducted to identify the role of skill sets in building flexibility and responsiveness in the Australian VET system, in providing training pathways into full qualifications, and in providing skills ‘top-ups’ to meet ongoing skills requirements after gaining a qualification. It is hoped therefore that the findings of this study will contribute to the formulation of a national policy on skill sets.

One policy for all types of skill sets

The case study shows that skill sets with flexible structures developed by registered training organisations have been filling a need in the VET sector for many years. The current policy development focus on skill sets in training packages with rigid structures may have negative consequences when applied to the skill sets developed by registered training organisations. The distinction between the two types of skill sets is an artificial construct. Both make a valid and valuable contribution to workforce skills development in Australia. Policy development relating to skill sets needs to focus on providing equal status to both types of skill sets, while maintaining the flexibility and responsiveness of skill sets developed by registered training organisations.

Skill sets design

This research has demonstrated the need for flexibility in the structures of skill sets. This includes skill set training through sector-based skill set pools, skill sets with a core and electives, and skill sets with no electives.

The study identified that a wide range of individual skill development needs exist in any cohort of learners. Given a choice, learners will select combinations of units of competency to meet individual, enterprise or industry training needs.

Data from the case study demonstrated that, when given access to a sector-based pool of units of competency with a structure, and completion rules that allowed enterprises and individuals to choose a unit or combination of units to meet skills development needs within a sector, students completed 292 different skill sets across 27 different job functions (from the rural production sector pool).

The research has clearly demonstrated the need for responsiveness and flexibility in skill set design. Current policy has the potential to limit the flexibility and responsiveness of skill sets in addressing the changing demands of workforce skills development by not allowing either skill sets developed by registered training organisations or those developed for training packages to contain electives.

The current policy relating to the identification and endorsement of training package skill sets has had the unintended impact of affecting the responsiveness of the system by first requiring the industry skills council of the relevant industry to identify the potential skill sets. This step is followed by a consultation process before they are endorsed, after which an industry skills council upgrade is loaded onto the Australian Government training website.

Registered training organisations have the capacity to be more responsive by developing their own skill set statements of attainment in response to industry, enterprise and individual needs. These organisations have for some time been using enrolment enablers like statements of attainment, with or without electives, accredited courses and partial enrolment in full qualifications to meet industry and enterprise workforce skills development needs. While the research was conducted in the agrifoods sector, the literature review and enrolment data from TAFE NSW indicates this may be common in other industry sectors.

In terms of the administration process, registered training organisations can either part-enrol students in a qualification or create a new skill set statement of attainment for each client group, despite the fact that the skill sets may only differ by one or two units of competency and have a common core. The issue posed by enrolment in a qualification is that it hides the intent of the student to complete only a skill set and has the potential to distort the completion rates for qualifications, as they are then recorded as a non-completion.

In summary, current skill set policy has focused on training package-endorsed skill sets and this has the potential to negatively impact on skill sets developed by registered training organisations.

The analysis of past registered training organisation practice demonstrated in this case study suggests that an opportunity exists to review current policy to ensure that it is providing a framework that allows industry skill councils and registered training organisations to respond quickly and flexibly with the minimum of administrative delay to meet the changing workforce skills training needs of the twenty-first century.

Skill sets registration recording and reporting

A critical limitation is the lack of coding for identifying the training intent and effort in the area of skill sets.

This issue could be addressed if statements of attainment and both training package-endorsed and registered training organisation-developed and -accredited short courses were coded in the AVETMISS reporting system. The coding would need to, at a minimum, identify the industry sector either as a source training package and/or a field of education code and the predominant AQF level of the units in the statement of attainment. This would allow tracking of enrolments and the completion of statements of attainment as a means of identifying the industry context and estimating training effort in skill sets. The coding would also need to separately identify statements of attainment issued as the result of a partial completion of a full qualification where the intent of the student was to complete the qualification.

Skill sets resourcing

It needs to be acknowledged that skill sets training – alongside and complementary to qualifications – is an essential component of a flexible, responsive VET system and therefore needs to be resourced accordingly. Care would be needed in developing resourcing models that did not provide price incentives to complete skill sets instead of qualifications. As new funding models are rolled out in a demand-driven VET environment, the resourcing of skill sets should be considered along with the funding policies attached to qualifications.

Further research required

The study of student training pathways and the views on skill sets developed by registered training organisations in the New South Wales agrifood sector represent only a snapshot and it would be useful to determine whether other industry sectors are likely to provide similar responses as the participants in this case study. The areas where licensing or professional/regulatory bodies' requirements are important is a further issue for examination. Evaluating the advantages and disadvantages of the various approaches to skill set design, including sector-based pools of units and skill sets with a core and electives, also has the potential to inform policy development in this area.

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Support document details

Additional information relating to this research is available in *Workforce skills development and engagement in training through skill sets: support document*. It can be accessed from NCVET's website <<http://www.ncver.edu.au/publications/2568.html>>.

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