Training product translation: Good practices in learning resource development

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Executive Summary

Australian Vocational Education and Training (VET) providers operate in a complex environment which requires the use of national training products, primarily 'Training Packages', to guide the work of course and learning resource design.

Training packages describe industry tasks and roles as they are performed in a competent way. They also include rules for combining 'units of competence' that categorise these performances into qualifications and the evidence (performance and knowledge) observed in the assessment of competency.

The process of interpreting training package content and elaborating it through research and dialogue to create learning resources can be regarded as a special kind of translation. To date, there has been little research on this translation process.

Skills Insight Jobs and Skills Council engaged Griffith University to undertake a project to examine translation across three qualifications:

- Certificate II in Rural Operations
- Certificate III in Agriculture
- Certificate IV in Veterinary Nursing.

Funded by the Australian Government Department of Employment and Workplace Relations (DEWR), the project involved collecting data from 12 providers, four per qualification, to gain insight into the processes and challenges of translation. Fifty-one interviews were undertaken for the qualitative part of the research. A survey of providers with one or more of the above qualifications on scope was also conducted to further explore translation processes.

Qualification selection for the research presented an opportunity to engage with current work by the VET Qualification Reform Design Group (QRDG), which has proposed three purposes for VET qualifications. The three qualifications that were the basis of provider selection were each considered to align to one of the QRDG purposes.

The qualitative findings confirm the complexity of translation in VET providers and the fact that numerous challenges need to be negotiated during the process. Data analysis resulted in findings which concern course purposes, and the processes of pre-translation, translation and mobilisation. These are briefly described below. A summary of challenges to these processes round-out the findings.

The course purposes articulated by the interviewed providers comprise an explicitly student- and community-centred purpose (for the Certificate II in Rural Operations). A focus on producing skilled, flexible graduates capable of contributing to both industry and community (Certificate III in Agriculture), serving and strengthening an occupation (Certificate IV in Veterinary Nursing). Some differences from the QRDG purposes were evident, particularly in relation to the student and community focus of Certificate II (Purpose 3) and Certificate III (Purpose 2) courses.

Pre-translation processes comprise deliberations leading to a decision by providers to create or change a course and/or learning resource(s). Six key influences are evident in the decision-making process: government (e.g. funding policy), the VET system (e.g. changes to a Training Package),

industry (e.g. demand for particular units of competency), context (e.g. local economic conditions), students (e.g. cohort profile) and provider (e.g. workforce expertise). Pre-translation involved more formalised and complex processes and stakeholder engagement in larger providers and more agile decision-making and engagement in smaller ones.

Translation processes triggered by these course decisions revolve around interpreting Training Package content in different ways. Two of these processes are at the course level. *Framing* refers to interpreting the rules for selecting elective units of competency. This process requires reading units and balancing interpretation against some of the influences that operated at the pre-translation level, particularly industry, students and training context. *Structuring* refers to grouping and sequencing units to create a cohesive course. More careful reading of units of competency is required to determine appropriate ordering of units. The second two processes concern learning resources as such. *Elaborating* begins with a close reading of units to determine the content and structure of learning resources and 'mapping' them back across the unit of competency and assessment requirements. Research, review, evaluation and production of resources complete elaboration processes. *Organising* is the fourth dimension of translation and is concerned with arranging learning sites so that appropriate equipment, materials, locations and spaces, as well as people and (for many of our providers) animals are available to support learning.

Mobilisation involves putting learning resources to use. This process includes updating the providers' learning management system (LMS). The LMS is one of the primary ways resources are made available for learning and reflects outcomes of framing and structuring processes. In terms of resource usage, the research identified a spectrum of practices that range from predominantly online delivery where resources are at the centre of learning through to predominantly educator-led modes of learning support. The latter practices were more common in the Certificate II courses where learners often struggle to follow text-based resources and are more dependent on the presence of educators. The research shows that VET educators play a highly significant role in the translation processes identified in this project. Their expertise influences framing, structuring, elaboration and organisation processes and they may be involved in pre-translation decision-making, lending their insights and expertise to teams making high-level curriculum decisions considering one or more of the six influences. In some examples, educators were the primary influence on learning design and can therefore be viewed as embodying a 'translation arc,' drawing on all the key translation processes to create meaningful learning experiences.

Challenges to translation highlighted by the providers we interviewed included slow Training Package updating timelines coupled with late notice of changes and lengthy and expensive redesign processes following Package changes. Most providers were concerned about the level of specification in units of competency which created numerous difficulties. This includes having to puzzle over interrelationships among details in competency and assessment documents through to dealing with requirements to use expensive and/or rarely used equipment and techniques, or to perform procedures that even graduates are not allowed to undertake in certain workplaces.

Despite the challenges, good practices were evident across the providers. Selected examples are discussed in detail, including:

- Collaborative, educator-led translation
- Deep roots in community and industry
- Designing for inclusion

- Authentic learning using simulation
- Weaving knowledge into competencies
- Enhancing qualifications.

The report culminates in a set of recommendations, divided into recommendations addressing the scope of Jobs and Skills Councils and those for the wider VET system.

Recommendations for the former concern the translation environment and how to enable creation of rich, innovative resources and teaching. Recommendations include making more space for the voice of educators in Training Package design and resourcing JSCs to facilitate educator networks and events to tap into educator expertise. System-level recommendations include a call to recognise the costs of translation when formulating funding policy, to expand the definition of competency that drives Training Package design and reclaiming and reintroducing the concept of curriculum to the VET system as a way to distinguish the expert translation work undertaken by providers and educators. These recommendations are made in the light of challenges and good practices observed during the research.

Project rationale and design

While policy makers, stakeholders and researchers debate the nature and content of Training Packages, relatively little is known about the processes providers use to translate Training Package content into the resources that support learning.

In theory, the Training and Education (TAE) Training Package (TAE Release 5) should describe resource design and relevant regulations (e.g. Standards for Registered Training Organisations (RTOs) 2015) should provide a framework for those activities. Yet how Training Package guidance and associated regulations are implemented in providers is not well understood at a system level. What factors influence the translation of Training Packages, who does the translation, how it is organised and what is produced are among questions that have not been researched in VET. These translation processes are critical to system quality and significantly influence interpretation of everything contained in Training Packages.

The research reported here is the first systematic attempt to describe Training Package translation in VET providers. The project was commissioned by Skills Insight Jobs and Skills Council (JSC) through an industry led activity process approved and funded by a Commonwealth Department of Education and Workplace Relations (DEWR) grant. Skills Insight, like other JSCs, is responsible for developing, revising and maintaining a set of Training Packages, in this case for the agribusiness, fibre, furnishing, food, animal and environment care industries.

With changes in the scope of JSCs, relative to their predecessors, Skills Service Organisations, there is interest in the wider use and impact of Training Packages, including how JSCs might better support translation. The Griffith Institute for Educational Research (GIER) at Griffith University was engaged by Skills Insight to conduct the research, which was undertaken between April and September 2024. The GIER team, comprising Steven Hodge, Anne Jones, Melinda Waters and Hugh Guthrie, worked together with Skills Insight to plan and manage the project. The Griffith University Human Research Ethics Committee reviewed and approved the research (Reference: 2024/264).

The research investigated the translation of three Training Package qualifications managed by Skills Insight by exploring the following overarching questions for training providers (RTOs):

How does your RTO go about developing a new training program based on national qualifications?

Who is responsible for turning training package content into effective VET programs in your RTO?

What are the features of effective learning and assessment resources for your RTO resulting from the development processes?

The research used a mixed methods design comprising a qualitative investigation followed by a survey sent to additional VET providers. The qualitative investigation involved gathering data from selected providers of three qualifications managed by Skills Insight:

1. Certificate II in Rural Operations

2. Certificate III in Agriculture
3. Certificate IV in Veterinary Nursing.

The selection of these case study qualifications was guided in part by current debate about the 'purposes' of VET qualifications. Work by the VET Qualification Reform Design Group (QRDG, 2024) has identified three main purposes:

Purpose 1 – qualifications leading to a specific occupation (for example a licensed trade). In our case, the Certificate IV in Veterinary Nursing was selected to reflect this purpose.

Purpose 2 – qualifications to prepare learners for multiple occupations within an industry. In our case the Certificate III in Agriculture represents this purpose.

Purpose 3 – qualifications that develop cross-sectoral or foundation skills and knowledge which may be applied across industries or lead to tertiary education and training pathways. The Certificate II in Rural Operations was selected as meeting this purpose.

In the Report's Discussion and implications chapter we reflect on the degree to which the selected qualifications articulate with these purposes.

For each qualification, four providers were recruited as 'sites' of translation. Skills Insight recommended 12 study sites from its provider networks based on selection criteria agreed with the Griffith team to ensure wide representation of VET provision including student cohorts. The twelve study sites are located in six jurisdictions, and represent a range of urban, regional and remote locations, provider types, size, delivery modes and student cohorts that include some of VET's most disadvantaged as well as more privileged learners. The providers comprise large jurisdictional providers, stand-alone TAFEs and a range of mono- and multi-purpose private providers. Ten of the providers are RTOs while two operate as sub-contractors to RTOs. For this reason, we use the term provider in this Report to refer to every study site.

Given the parameters of the project, between two and seven people were interviewed for each site, with 51 interviewed in total. The following kinds of participants were recruited:

- Senior education leaders with insight into the rationale of the qualification and its development process
- Education managers or coordinators with compliance, quality and/or delivery and assessment leadership roles
- Education designers who are people close to the original or ongoing design and revision of resources for the qualification in question, and
- Educators teaching units within a qualification.

Jobs and job titles vary enormously across the sector so we use the following titles when attributing quotes to individuals in this report: Senior Education Leader, Education Manager, Learning Designer and Educator. In some cases, a single participant played more than one role and this is indicated. Where possible, members of the research team visited a site and conducted at least some of the interviews on location. Other site interviews were conducted online. The interview questions are contained in Attachment 1. The interviews were recorded with permission from participants and transcribed for analysis.

Following the interviews, the researchers analysed the data obtained from all sites, noted patterns and variations against the general structure of the interview questions and as a basis for tracing,

comparing and evaluating translation practices. A translation model emerged through this method, revealing processes and meanings that were not necessarily expected. The Findings section of the report is based on this emergent model, and presents key variations in translation practices and discusses challenges to translation highlighted by the providers.

A survey was designed on the basis of the translation model emerging from the qualitative data and sent to additional providers of the three qualifications. The survey was intended to determine if the practices found in the 12 study sites were representative of translation in other providers that offer these qualifications. Due to a relatively low response rate (n=23), survey results were summarised and accommodated to a limited extent. A summary of the responses is contained in Attachment 2.

As a preliminary to the research, the GIER team reviewed research and policy relevant to this translation study. In Australian VET there is a history of translation policy and practice marked by periods of fundamental change. Prior to the training reform era (1990s) translation was considered under the heading of 'curriculum'. Policy and research focused on curriculum and what is called translation in this project was much more visible than in the years following training reform. In the decades since, there has been policy development including guidance in the TAE Training Package referring to program 'design' and 'development,' although there has been little research into how providers undertake these translation processes.

The next section summarises the literature review as well as reflects on how Australian VET might consider the translation processes used in Australia's schooling and higher education sectors, and in VET sectors in four other advanced economies.

Translation: what the literature tells us

This section summarises an extensive literature review undertaken for this project. We explored definitions of curriculum and translation and why the latter concept can be a useful lens for understanding curriculum-making processes through the history of VET. We examine where and why we lost this important concept from the Australian VET lexicon and how Training Packages have become national statements of learning for the VET sector. We looked at curriculum models and translation processes in Australia's higher education and school sectors for ideas that could inform improvements in VET curriculum design and development. Finally, we looked at what Australia can learn from four international VET systems in advanced economies (Germany, Scotland, Singapore and Sweden) similarly using national statements of learning outcomes to guide translation.

Translation

We use the metaphor of translation to refer to the activities VET providers engage in to create resources which support learning consistent with Training Package requirements. The origins of the term 'translation' mean to move something from one place to another. In common English language usage, however, translation is associated with the process of taking meanings expressed in one language and making them available to speakers of a different language. This linguistic reference for the term has been studied from several angles (e.g. Benjamin, 1969; Steiner, 1998; Eco, 2008).

For example, according to Jakobson (in Hodge, 2024a), translation can be intralingual, interlingual or intersemiotic. Intralingual, the simplest form, is the rephrasing of information to make it more understandable for an audience. We can see this in VET when the information contained in units of competency is explained to students. Interlingual refers to the translation of information from one language into another and is what is most commonly understood by the term translation. This type of translation can be observed in VET when a Training Package qualification is translated into another language (e.g. 'Training Package speak' into terms an employer can understand or into an Australian Indigenous language). Intersemiotic translation, the most complex form for Jacobson, converts one way of sense making into another. For example, a dance expressing an Indigenous dreamtime story is translating story into another interpretative medium (performance), which can be interpreted and understood very differently. This form of translation is relevant to teaching in VET when the requirements of a unit of competency are translated into learning activities, games, resources and assessments.

Researchers have moved beyond this linguistic application of translation to consider, for example, how policies, concepts, technologies and innovations are taken up in organisations, systems, communities and knowledge fields (e.g. Callon, 1984; Latour, 1987; Law, 1997). Freeman's (2009) review of translation offers a useful analysis that draws attention to the way the processes of taking, adapting and implementing ideas, rules, templates, technologies, etc., always involves transforming original intentions.

In the fields of research, policy and technology, 'translation' is a creative process that takes something significant in one context and reshapes it so that it has significance for a new context. In

this view, the influence of contexts is at least as important as the transmission and preservation of some authoritative, original content. For example, the translation of research involves interpreting and analysing a promising discovery that is expressed in reports, peer-reviewed papers and models, and creating a new version that can be used by practitioners to address particular problems and needs in their own environment. Or a technological innovation like generative artificial intelligence can be taken up and used in ways the originators of the technology could never have imagined. Applying Freeman's 'sociology of translation' approach, we can expect local knowledges to infuse whatever has arisen elsewhere to produce a unique version recognisable and useful in a particular community and place.

Research by Edwards (2012) in the United Kingdom's (UK) further education (FE) system used this approach to investigate how professional cookery standards were implemented in different providers. That research found very different implementations of the standards due to a complex range of contextual factors, including available resources, student cohort profile, provider traditions and policies, and educator interests and expertise. The powerful and complex influence of local actors – both material (such as templates and technologies) and social (management, teachers, students) – decisively shaped the interpretation of standards to produce distinctive implementations.

Such contemporary social and material understandings of translation offer this research a helpful lens for comprehending the way information in Australian Training Packages can travel through the system and be creatively interpreted and applied by different actors along the way and in different contexts. In this environment, the creativity of translation sets up a tension between local practices and the interest of regulators in maintaining fidelity to the intentions expressed in the Training Packages. The weight of research and theory in other domains suggests the creativity of translation cannot be directed nor suppressed. Indeed, this creativity is necessary to meaningfully address the great diversity of students, employers and localities that make up the reality of VET provision.

Translation and curriculum

The metaphor of translation foregrounds the activities of VET providers to create learning resources. Outside Australian VET, these activities and their products are generally termed 'curriculum'. These activities can be seen to stretch from the determination of learning outcomes through the design of courses and resources to their implementation. At the national level, curricula can include national qualification frameworks, laws, education and training policy, qualification standards and specifications, curriculum guidelines, subject descriptors, performance objectives and other centralised statements that determine what students should learn. Curriculum is also used as a quality control mechanism to link national education goals with the design, organisation and planning of learning activities in educational institutions (Cedefop, 2010).

The political dimension of curriculum reflects broader national traditions, social and cultural values, economic and industrial structures, and political preferences of a country (Bauer & Gessler, 2017). This dimension strongly influences how intended outcomes are expressed, how individuals and educational organisations act on them, and how information flows from one level to another in the system. More locally, curriculum defines learning objectives, content, place and duration of learning, teaching and assessment methods (to a greater or lesser extent) and type of learning

resources; all of which depend on the type of education and training, institution and their local context (Cedefop, 2010).

Curriculum is a central concept in other Australian educational sectors. Significant research has been undertaken in the higher education and schooling systems into the definition of curriculum, models for curriculum development, who should be involved in the process, and factors that enhance or constrain good curriculum practice. Some researchers have categorised curriculum into different types (e.g. Billett, 2011) to better comprehend the process and the flow of information.

The most easily recognised curriculum is the 'intended' (sometimes referred to as 'official,' 'prescribed' or 'written' curriculum), which is often decided centrally by people in authority and/or with specific expertise. This curriculum conveys explicit intentions about what should be achieved and assumptions about knowledge and the way it should be taught (Cedefop, 2022). In Australia's VET system, legislated standards require providers to use Training Packages (or Accredited Courses) as the key point of reference for curriculum and key source of information for the development of courses and resources. Debates about education (including VET) often revolve around this curriculum, particularly around who decides on structure and content. Researchers have also distinguished:

- the 'implicit,' 'unintended' or 'hidden' curriculum (e.g. Giroux & Penna, 1979), which refers to learning that falls outside the intended curriculum,
- the 'enacted' or 'taught' curriculum – or curriculum in action (e.g. Zumwalt, 1988),
- the 'experienced,' or 'learned' curriculum (referring to the learning experiences and achievements of learners) (Cedefop, 2022), and
- the 'attained' curriculum: the knowledge and skills students retain from their learning experiences (e.g. Santos & Cai, 2016).

These multiple, interrelated forms of curriculum are firmly established in research and theory and reveal the complexity of curriculum work in education providers. Adding to this complexity, the boundaries between curriculum concepts blur when empirically scrutinised. For example, in Australian VET the pressures of regulatory compliance impact significantly on the enacted (teaching) and experienced curricula (student perspective), sometimes resulting in different outcomes from those intended in official curriculum. The Standards for RTOs also determine translation sources by requiring providers to collect information from industry, employers, students and other sources and to use that information in addition to the information contained in units of competency to shape their curriculum.

A brief history of curriculum in VET

The term 'curriculum' can be found in VET policy as far back as the Martin Report of 1964 (Committee on the Future of Tertiary Education in Australia, 1964). This report recommended that curriculum for technical education (at diploma level) should include 'liberal studies' to develop the 'critical, imaginative and creative abilities' of students and their awareness of the social implications of their work' (Committee on the Future of Tertiary Education in Australia, 1964, p. 182). The report warned that too much emphasis on technical aspects could lead to over-specialisation and too much 'training' rather than education.

Some years later, the Kangan Report (Australian Committee on Technical and Further Education, 1974) echoed calls for more general education in VET curriculum beyond preparing people for technical roles, advocating for lifelong learning, a national VET (TAFE) system, 'second-chance education' and a National Centre for Research and Development (now the NCVER). This National Centre's first priority was to research the skills required for various occupations and to develop 'National Core Curricula' to be agreed by TAFE Authorities (Jones, 1983). The aim was to improve national mobility for students and the ownership of curriculum by educators, as well as their capability to develop it (Parkinson & Broderick, 1988).

The Instructional Systems Development (ISD) model was the dominant approach to creating technical curriculum at that time. Under this model, trained analysts would study competent work and use taxonomic analyses to generate statements of 'enabling' and 'terminal' objectives. This sophisticated approach to analysing occupational expertise was applied with varying degrees of rigour in TAFEs (McBeath, 1986).

Kangan's vision was replaced in the late 1980s by the 'Training Reform Agenda' (Dawkins & Holding, 1987). This policy radically shifted VET from an 'educator-led' and 'curriculum based' system to an industry-led system (Harris et al., 1985; Guthrie, 2009) based on national objectives or competency statements. This major shift was driven by perceived inconsistency, inflexibility and lack of industry-relevance across VET curriculum. A major element of the new approach was competency-based training (CBT), a model for designing programs of learning that replaced the ISD method. The latter had been found to be too slow and expensive to apply to skills systems in other countries, leading to the emergence of the more rapid 'Develop A Curriculum' (DACUM) method in Canada, and the 'Competence-Based Education' model in the United States (Joyner, 1995). Both models were adopted by the UK during reforms to FE in the 1980s and heavily influenced VET reforms in Australia. Training Packages were progressively introduced from the mid 1990s and VET educators lost their influence over how VET qualifications were developed and written (Hodge & Guthrie, 2019). The language of skills, tasks, products and training solutions was normalised and assessment, the underpinning principle of CBT, became the dominant driver of curriculum design, development and delivery.

Since that time there has been much debate over CBT and its philosophy, structure, content, flexibility and balance of transferable and technical skills. Criticism has shifted to the language of Training Packages and if a 'one-size-fits-all' approach to the regulation, development and maintenance of them is the best approach (see National Quality Council & Council of Australian Governments, 2009; Department of Industry, 2014; Wheelahan, 2016; Hodge & Guthrie, 2019). At the same time, the term 'curriculum' fell out of use and now does not feature as a specific term in NCVER's current 500-term Glossary of VET.

Despite the long-running debate about CBT in Australia, the definition of competency that currently drives the conceptualisation of Training Packages and the structure of units of competency has retained its focus on workplace tasks since the early 1990s. A comparison of the definition in Australian VET over time shows how little it has changed. The National Training Board (1991) defined competency as

> The ability to perform the activities within an occupation or function to the standard expected in employment. (p. 30)

The Review of Training Packages (National Quality Council & Council of Australian Governments, 2009) recommended an expansion rather than overhaul of the definition. It's definition is the one that is currently fixed in legislation (Standards for RTOs 2015), where competency is defined as:

> The consistent application of knowledge and skill to the standard of performance required in the workplace. It embodies the ability to transfer and apply skills and knowledge to new situations and environments.

The first sentence of this definition is particularly evident in the focus of units of competency which serve as the ultimate reference point for learning resource development and teaching in VET.

The units are structured according to tasks and roles, which are broken down into elements and performance criteria that stress observable behaviours. The knowledge and skills that are supposed to facilitate transfer and application to new situations and environments are most clearly represented in the Assessment Requirements documents that accompany each unit of competency.

However, the unit and requirements documents are conceptualised differently yet need to be reconciled by providers to ensure compliant translation. This difference is one of the topics that we consider in the Findings and analysis chapter below. We also return to the question of the definition of competency in the Concluding discussion at the end of this chapter, and in greater depth in the Discussion and implications chapter.

Current translation expectations

In terms of how units of competency are supposed to be translated in Australia's VET system, the process is described in a general way in the Standards for RTOs (2015), and more specifically in units of competency and assessment requirements documents in the TAE Training Package.

These units describe how educators and designers should use Training Packages and other Accredited Courses to design and develop learning programs and resources.

Translation is also referenced in special information in particular Training Packages relating to program design, and guidance from the national Australian Standards and Quality Agency (ASQA), the Victorian Registration and Quality Authority (VRQA) and the Training Accreditation Council (TAC) in Western Australia. Information about translation from selected sources is summarised below.

The Federal *Standards for RTOs 2015* sets the rules for VET providers through eight Standards. The first of these, Standard 1, is the most relevant to translation:

> The RTO's training and assessment strategies and practices are responsive to industry and learner needs and meet the requirements of Training Packages and VET accredited courses (Standards for Registered Training Organisations (RTOs) 2015, p. 13).

This standard draws attention to the critical activities of providers as 'strategies' and 'practices' and breaks down further into 27 sub-points. These include Standard 1.3 which requires that the provider has a sufficient workforce (1.3a), services (1.3b) and facilities (1.3d), along with learning resources to enable learners to meet the requirements for each unit of competency, and which are accessible to the learner regardless of location or mode of delivery (1.3c).

Standard 1 also addresses industry relevance and learner support. In relation to the first of these, providers are expected to use:

> Strategies for industry engagement and systematically [use] the outcome of that industry engagement to ensure the industry relevance of … (1.6a) its training and assessment strategies, practices and resources (1.6).

With respect to students, providers are required to determine: the support needs of individual learners and [provide] access to the educational and support services necessary for the individual learner to meet the requirements of the training product as specified in Training Packages or VET accredited courses (1.7).

The Standards for Registered Training Organisations (RTOs) 2015 thus provide a framework for translation that places Training Packages and/or Accredited Courses at the centre of provider training strategies, practices and resources, and in addition, expect providers to liaise with employers to 'ensure [their] industry relevance'.

Further, the 'support needs' of learners should be 'determined', and services offered to address them. There is no clear suggestion in the standards, however, that the determination of learner needs should influence learning resource design. Neither do the standards reference community and regional needs, although presumably these would impinge on employer and student needs and therefore factor into a provider's training strategies, practices and resources.

It is the responsibility of ASQA, Victoria's VRQA and Western Australia's TAC to regulate providers against the *Standards for RTOs* (and related state legislation in Victoria and WA). ASQA offers guidelines to help providers interpret the *Standards*, including for Standard 1 considered above. In relation to translation and curriculum, ASQA requires a 'Training and Assessment Strategy' (TAS) to be developed and maintained for each course. A TAS can apply to a whole qualification or part taken from a Training Package, or to an Accredited Course, and should contain the following:

- Identification of the 'training product' (qualification, part of course)
- Clarification of core and elective units or modules, and the sequencing of them
- The intended student group(s)
- Information about the 'mode of delivery' or how the teaching/training will be undertaken (e.g. online learning, classroom-based, workplace-based or a combination of modes)
- Duration of the program
- Assessment methods, resources, and timing and
- Required learning, human and physical resources.

ASQA allows for different types of strategy for shorter 'single unit', module or 'skill sets' (groups of units with a discrete industry outcome) and teaching or assessment only programs.

However, ASQA's guidance on learning resources is brief. The authority explains that such resources are required to, 'ensure students are able to obtain and absorb the required knowledge and skills prior to assessment' and that providers should 'carefully choose and plan the learning resources' they will use to guide them. Providers must also: identify these resources in [their] strategy to ensure [they] obtain full coverage of all required areas (ASQA, 2024).

More detail on how translation is envisaged in Australian VET is contained in the TAE Training Package (available at https://training.gov.au/Training/Details/TAE) which describes the competencies educators, learning designers and assessors need. The most significant units related to translation are:

- Use nationally recognised training products to meet vocational training needs (TAEDES411)
- Design and develop plans for vocational training (TAEDES412)
- Design and develop strategies for training and assessment (TAEDES511).

These units are nominated because they are among the core units for an entry-level VET educators' qualification, the Certificate IV in Training and Assessment (TAE) (TAEDES411 and TAEDES412), and for the higher optional specialist qualification for VET educators, the Diploma of Vocational Education and Training (TAEDES511).

A closer look at these units offers a description of the essential tasks comprising these competencies and, most relevant from the perspective of this research, what knowledge and performances underly and express the tasks. For the Certificate IV unit, TAEDES411, the Elements ('essential outcomes') are:

1. Prepare to use nationally recognised training products
2. Analyse nationally recognised training products

3. Apply and evaluate selected nationally recognised training products.

The second of these outcomes most directly relates to translation, since it concerns engagement with Training Packages and/or Accredited Courses. This element includes the following 'Performance Criteria':

2.1 Read and interpret nationally recognised training products that may meet training needs

2.2 Select those training products that meet identified needs

2.3 Review and interpret information in available support material relating to selected training products

2.4 Access and interpret existing training and assessment strategy to determine the training context and assessment environment.

According to translation theory (e.g. Steiner, 1998), effective interpretation is a critical ingredient of quality translation, so it is highly appropriate that this process is included in this unit.

In terms of further guidance on the above elements and performance criteria, units of competency are all complemented by an 'Assessment Requirements' document that specifies the 'Performance Evidence' and 'Knowledge Evidence' that an assessor of this or any other unit of competency would need to confirm. For this unit, knowledge evidence includes familiarity with the regulatory frameworks pertaining to Training Package translation, such as the National Register of VET (the source of competency documents) and the Australian Qualifications Framework (AQF) which applies to both VET and higher education.

In addition, this evidence includes knowledge of the 'purpose, structure and content of accredited courses and endorsed Training Package qualifications, skill sets, units of competency, and their associated assessment requirements,' along with a 'methodology relating to analysing and using nationally recognised training products to meet the skills and knowledge needs of learners'. This methodology would be the core capability for translation. However, it is unlikely that these unit outcomes can be achieved in the time available for typical Cert IV in Training and Assessment delivery.

Research by Hodge (2014) found that some graduates of this qualification, despite being deemed 'competent' in these skills, were in fact unsure what this 'methodology' involved or how to apply it.

The Certificate IV unit 'Design and develop plans for vocational training' relates both to planning in terms of sequencing identified units or modules, and to planning individual sessions. Performance Criteria for the second Element, 'Design a plan for vocational training' to some extent overlaps the task of analysing Training Packages, but goes further:

2.1 Access and interpret nationally recognised training products and identify training and assessment requirements

2.2 Analyse a unit of competency or skill set, and identify learning components to scaffold

2.3 Determine a training sequence for delivery of skills and knowledge to support learner progression

2.4 Determine learning activities to support and engage learners in each component

2.5 Identify and evaluate suitability of existing learning resources

2.6 Estimate duration of training required for each learning component tailored to learner group characteristics

2.7 Document overall plan and structure according to legislative and regulatory requirements, organisational procedures and sustainability considerations.

Here 'learning activities' are identified as something that need to be 'determined' to support learning. Such activities are the key outcomes of translation processes.

The next criterion (2.5) concerns learning resources but assumes that they are already available rather than something needing to be developed to support learning. Regarding the knowledge requirements for this unit, there is once again reference to frameworks and sources of guidance. In addition, knowledge of 'basic instructional design principles relating to designing and developing plans' is required. Given this body of knowledge is extensive and sophisticated, it is unclear what 'basic' part of it is intended by the requirement.

Potentially, a great deal of valuable information could be drawn from the instructional design literature to enhance VET. TAFE systems were applying this sort of knowledge to their curriculum design processes prior to National Training Reform Agenda (e.g. McBeath, 1986), but its use was overshadowed by the introduction of CBT which is founded on different principles.

Apart from basic instructional design knowledge, requirements include knowledge of facilitation techniques, modes of 'delivery', learner characteristics and their implications for planning, and 'processes of interpreting nationally recognised units of competency' (although what these processes involve is not explained). The substantial knowledge requirements for this unit also extend to learning theories and adult learning principles as they relate to planning.

The third unit we consider is 'Design and develop strategies for training and assessment' (TAEDES511). Compared with the two just introduced, this unit is held by far fewer educators in VET because it is part of the optional Diploma, whereas the previous two are core units within the widely held entry-level Certificate IV in TAE. The Elements for this unit are:

1 Prepare to design strategy for training and assessment

2 Design and develop training strategy

3 Design and develop assessment strategy

4 Finalise strategy for training and assessment.

The second of these elements is most directly concerned with translation and contains the following nine performance criteria:

2.1 Analyse selected nationally recognised training products to identify skills and knowledge requirements

2.2 Analyse options for training strategy design relevant to purpose, target group, industry requirements, learning environment, nationally recognised training products and training provider

2.3 Identify and document training mode of delivery

2.4 Identify and document mandatory entry requirements of nationally recognised training products and additional selection requirements set by training provider

2.5 Estimate training duration and time needed to develop skills and knowledge of target group prior to being assessed

2.6 Document amount and duration of training and schedule of training sessions

2.7 Identify and document learning resources ensuring full coverage of unit of competency requirements

2.8 Identify and document human resources required to deliver the training and confirm their availability

2.9 Identify and document physical resources required for training and confirm their availability.

Whereas the Certificate IV units were concerned with planning, this unit addresses the TAS that all providers prepare for each discrete course (e.g. qualification). There is an emphasis on estimating duration of training, careful documentation, scheduling of sessions but, in relation to learning resources, the guidance is limited to identification and ensuring coverage of competency requirements. In relation to the Knowledge Evidence for this unit, a strategic focus is maintained (e.g. knowledge of legislative and regulatory requirements) although interpretation is referenced in terms of:

- processes for interpreting nationally recognised units of competency to identify the standard of performance required, including for identifying:
    - requirements in the products relating to foundation skills: language, literacy, numeracy, digital literacy and employability skills
    - structure, content and application of products relevant to learning, and how they are addressed in training.

It should be noted that the Diploma of VET must include nine elective units, depending on the 'specialisation' of the qualification. One of the three specialisations is 'Design and Development', and units for that specialisation include:

- Design and develop assessment tools (TAEASS512)

Plus at least four of the following units:

- Develop and implement plans for recognition of prior learning (TAEASS514)
- Design and develop print-based learning resources (TAEDES512)
- Design and develop e-learning resources (TAEDES513)
- Research and develop nationally recognised training products (TAEDES514)
- Undertake organisational training needs analysis (TAETAS511).

In summary, VET providers are required to adhere to a set of legislated standards which are regulated and require them to use Training Packages and/or Accredited Courses as a key source of information for developing their learning programs and resources that are represented at a high level in a TAS.

Providers are required to develop learning plans, create or acquire resources to support learning, survey and consult with industry and their students to shape their plans and resources, analyse student characteristics to shape learning support, and employ appropriately qualified people

whose expertise include at least those of interpreting Training Packages and/or Accredited Courses, and planning for learning and assessment.

Within the TAE Training Package, however, there is little direct guidance on how translation subsequent to interpretation is to be performed, with most instructions appearing to assume that learning resources are already available. Optional competencies within the Diploma of VET include more detailed guidance on translation and refer to bodies of knowledge such as instructional design and 'universal design for learning' principles. Amongst our recommendations later, therefore, is a review of the TAE Training Package to ensure translation and resource design are appropriately represented.

Translation in other Australian education sectors

Australian higher education providers (HEPs) and secondary schools have long-established and systematic systems and processes to translate statements of learning outcomes into curriculum. Curriculum in both sectors is framed by strong aspirational purposes that are articulated at national, jurisdictional and institutional levels.

Translation in Australian schools

In the school system, a series of declarations signed by all jurisdictions articulate a national vision for the education for all young Australians. The most recent is the Alice Springs (Mparntwe) Declaration. School systems and individual schools also have their own statements of purpose and educational philosophies and need to juggle these and other statements when designing local curriculum.

As with VET, secondary education is governed by states and territories and is highly privatised compared with other OECD countries (OECD 2023a). Students within this system can experience secular or faith-based education, specialised support for special needs, different approaches to age and study level groupings and different educational philosophies, such as Montessori and Steiner. Some schools offer International Baccalaureate, HE and/or VET units and qualifications alongside or instead of jurisdictional curriculum.

The Australian Curriculum, first released in 2011 for the entire national school sector, consists of two curricula: the Australian Curriculum F-10 (for compulsory years) and the Senior Secondary Curriculum (years 11 and 12). Curriculum for all post-compulsory education (years 10 - 12) must comply with the AQF.

Although the entire school sector follows the national curriculum its interpretation and implementation vary across jurisdictions and school systems to align with jurisdictional priorities, school system or individual school allegiances to faith or other educational philosophies. State and territory authorities oversee implementation and the certification of senior secondary qualifications and tertiary entrance in their jurisdictions (Ross, 2021). They also determine curriculum content and how achievement standards are integrated into courses, assessment, certification specifications and guidelines on entry and exit points and credit for completed study (ACARA, 2024).

The national system is regulated by the Australian Curriculum and Assessment Reporting Authority (ACARA). Queensland, the Australian Capital Territory, the Northern Territory, Tasmania and

South Australia use the Australian Curriculum, while Victoria, New South Wales and Western Australia produce repackaged, rebadged versions. Non-government schools are required to align with the Australian Curriculum (or state curricula when in place) but experience difficulties implementing the Australian Curriculum across multiple jurisdictions (Savage, 2018).

Given the diversity of the Australian secondary school sector, it is not surprising that curriculum is translated into learning experiences in many different ways. The Australian Curriculum was designed to be read by teachers and taught through teacher interpretation recognising that it is the work of teachers to design learning and assessment tasks that meet the needs of their students (Ross, 2024; Savage, 2018). Traditionally teachers have worked with their networks, school leaders and colleagues to design learning plans and other resources to support student learning.

Australian school educators, who are trained to Bachelor degree level at least, can access multiple sources of information and resources to support their translation of curriculum into learning and assessment plans, activities and resources. These established networks and resources are produced centrally by education authorities, research organisations, public content developers, commercial publishers and other sources.

In just a few examples, ACARA produces illustrations of practice, work samples, connections to the curriculum, teaching and learning tools and links to reports and relevant research; the Australian Council for Education Research (ACER) produces professional development and teaching resources; ABC Education provides a large amount of video, audio and print content and commercial suppliers offer contextualised resources.

However, there are tensions in the secondary sector (and internationally) between resources designed to 'educator-proof' delivery and reduce educator's workloads and those designed to support interpretation by well trained, professional educators (Hodge, 2024b; Stacey et al., 2024).

The translation of national curriculum in schools provides valuable insights for VET, in particular demonstrating the value of robust research into curriculum translation processes, the adoption of universal principles to improve learning pathways across a student's life course and opportunities to provide multiple types of resources to help educators plan and deliver learning, with due consideration of the potential challenges (Stacey et al., 2024). Less prescriptive, more creative and adaptable teaching and learning resources could potentially better support VET providers to develop high quality, customised resources that meet local industry, community and student cohort needs.

Translation in Australian higher education providers (HEPs)

Although vocational and higher education sit alongside each other as post-school destinations they occupy very different curriculum universes with respect to theory and practice relating to curriculum, pedagogy, assessment, educator qualifications and regulation (Hodge & Knight, 2021; Hodge et al., 2024).

Like schools, HEPs express overarching aspirational visions for their students and distinctive statements of purpose. HEPs are regulated by the Tertiary Education Quality and Standards Authority (TEQSA) and vary enormously in size and breadth of disciplines from large universities to small providers offering a single discipline, traditional research-intensive universities, newer teaching-focused universities, dual sector institutions, some TAFE institutes and finally HEPs owned by professional associations and churches.

As a result, HEPs differ significantly in academic culture, governance systems and curriculum practices and even in the way they describe curriculum. All HEPs develop their own curriculum and either self-accredit (in the case of universities) or undergo external accreditation by TEQSA if they do not have self-accrediting authority. HEP curriculum design and documentation processes are governed within each institution like those used in higher education institutions in many countries (Hodge et al., 2024).

All HEPs adhere to the Higher Education Standards Framework (Threshold Standards) 2021 to maintain their registration. Public universities and TAFEs also operate under parliamentary acts or other legal instruments that specify their purposes and some curriculum requirements.

The Standards have significant implications for curriculum architecture and outcomes, as well as for HEP's internal academic governance systems and curriculum processes. They determine which qualifications HEPs can deliver, require alignment with the AQF, and that HEPs demonstrate strong academic governance, curriculum design and development systems and capability, including governing body oversight of curriculum design. Self-accrediting HEPs have TEQSA's approval to do so, based on the standard of their academic governance processes.

Many HEPs comply with complex guidelines set by professional associations that accredit curriculum. For example, Engineers Australia's accreditation manual specifies detailed competencies, learning outcomes and learning experiences for courses seeking accreditation. In some cases, HEPs need to navigate the accreditation requirements of multiple professional bodies (Bajada et al., 2019). Importantly, these guidelines and standards '...*inform* rather than *become*...' the curriculum in these providers (Hodge et al., 2024). Higher education curriculum is also shaped by the bodies of knowledge that comprise academic disciplines (Barnett, 2009).

Within HEPs, curriculum development processes are typically overseen by an Academic Board with membership representing the Council or board, senior academics and staff and sometimes students. Most major curriculum changes are made during scheduled, cyclic reviews or evaluations and formal re-accreditations aligning with timeframes designated by a HEP, TEQSA and/or a professional accrediting organisation.

Historically, they have been 'bottom-up' heavily reliant on the disciplinary knowledge of teachers and governed principally by internal processes (Barcan,1979; Klassen, 2022). Curriculum development is still undertaken by academic staff, but they now navigate a maze of sometimes conflicting external and internal standards, regulations, accreditation requirements and other influences. Universities value disciplinary expertise highly and expect unit coordinators to produce original content for courses and learning resources.

Curriculum development processes are usually highly collaborative, involving students and academics and industry representatives with disciplinary and occupational relevance (Bajada et al., 2019; Klassen, 2022; Tight, 2024). They are also informed by institutional and national data collections and curriculum analytics and research (Tight, 2024). In larger, well-resourced institutions, academics may be assisted by support staff with instructional design and curriculum development expertise.

Translation in selected international VET systems

Scotland, Sweden, Germany and Singapore VET systems were reviewed for this project as their systems, like Australia's, are based on centralised statements of learning outcomes. They also share the challenge of keeping pace with rapidly changing economies, industries and communities, while

adhering to VET quality standards. It is difficult, however, to draw direct comparisons between curriculum making practices amongst these countries due to their different political, economic, cultural, and social contexts and VET traditions and purposes, all of which shape the form and function of curriculum (Cedefop, 2010).

Germany for example has an institutionalised model of VET (Grubb, 2006). Sweden and Scotland have market-driven models (Gallacher & Reeve, 2019) and Singapore's technical and adult education (TAE) system is the most centrally coordinated (UNESCO-UNEVOC, 2020). Sweden's model is the most decentralised, driven by student choice (Cedefop, 2023a). The Scottish VET system bears strong similarities to Australia, but the Scottish Government provides guidance on curriculum design and delivery under the Further and Higher Education (Scotland) Act 2005.

The German VET system, renowned for its 'dual' VET system (i.e., courses with institutional and industry-based components), as well as strong employer involvement and clear links between VET and the labour market (Bauer & Gessler, 2017). The system operates under numerous Acts and has many entities responsible for different parts of the sector. Germany also has a range of different VET providers, characterised by the type of qualifications they offer. To make comparisons more difficult, most initial VET is delivered in upper secondary schools in Germany, Sweden and Singapore, and mostly through apprenticeships (OECD, 2023b), where students attend school and simultaneously experience work-based learning in a company.

The differences and similarities these countries have with Australia's VET system provides useful background for this research. One striking difference we highlight is the vision and purpose each country articulates for its VET system, which go well beyond the technical skills needed in their economies to encompass broader skills, knowledge, capabilities and attributes that drive translation at all levels of the system. For example, Scotland's Curriculum for Excellence (CfE), which covers all students under 18 years of age (including in FE institutions), seeks to develop successful learners, confident individuals, responsible citizens and effective contributors (Education Scotland, 2024). This curriculum outlines learning outcomes, experiences and principles for course design, evaluation and teaching and assessment based on principles of coherence, relevance, breadth, depth, challenge and enjoyment, personalisation and choice.

VET in Scotland is also delivered by FE colleges, schools, independent and third sector providers (offering accredited community courses), local authorities, employers and employer organisations, voluntary organisations, social enterprises, trade unions, government agencies and Independent Training Providers that play a major role in the delivery of Modern Apprenticeship (MA) (Gallacher & Reeve, 2019). Misko and Circelli (2022) found a broader conception of competence in the Scottish MA Framework for students in the Creative and Cultural Industry. This framework stipulates a broader range of skills and personal and motivational attributes in its 'conception of what it means to be competent,' even before applicants are considered for an apprenticeship (Misko & Circelli, 2022, p. 7). Key competences serve a similar purpose to learning outcomes as high-level curriculum requirements (Cedefop, 2010). 'Work situations,' developed by Skills Development Scotland (SDS) specifically for apprenticeship curriculum, describe what happens on the job for an experienced worker in a particular role, the activities they perform and the 'meta-skills' defining their role.

In Germany, VET curriculum is based on occupations as an organising principle (Gessler & Howe, 2015) as well as fundamental principles of 'vocationalism' (Berufsprinzip, or 'integrated capacity,' a 'readiness to act' in work situations), 'learning fields' (Lernfelder, or based on real work

activities) and 'professional competence' (Handlungskompetenz) (Cedefop, 2022). Competence is described in the German Qualifications Framework Working Group (2011) as:

> The ability and readiness of the individual to use knowledge, skills and personal, social and methodological competences and conduct himself or herself in a considered and individually and socially responsible manner. Competence is understood in this sense as comprehensive action skills. (p. 14)

Germany has dual statements of learning outcomes (ordinances for training in companies and standards and framework curriculum for school-based VET) and a growing emphasis on key competences such as teamwork, working within flat hierarchies and language and communication skills (Wittig, 2021).

Singapore's technical and adult education (TAE) curriculum focuses on both technical and generic competencies (or critical core skills). The latter are organised under three clusters: thinking critically, interacting with others and staying relevant. Each competency has three levels of proficiency, embedded in statements of technical skills (Misko & Circelli, 2022).

Curriculum in Singapore's Institutes of Technical Education (ITEs) allocates around 15% of each VET program to learning based on a 'hands-on, minds-on, hearts-on, whole person, life skills' philosophy. A 'Plan, Explore, Practice, Perform Model' underpins curriculum design and 21st Century skills are mandatory for all VET students (Tucker, 2016). Polytechnics, which sit between ITEs and the university system, deliver mid-tier paraprofessional qualifications such as engineering (UNESCO-UNEVOC, 2020). Notably, Singapore has recently shifted to more flexible and broader curriculum options (Mardiana et al., 2020).

The Swedish National Qualifications Framework (SeQF) for lifelong learning, which follows the European Qualifications Framework (EQF) (but does not include higher education), describes competence as:

> The proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy (European Union, 2008, p. 11).

In this definition. skills are the ability to apply knowledge and use know-how to complete tasks and solve problems, and are described as:

> Cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments) (European Union, 2008, p. 11).

Sweden builds on this definition of competence by including decision-making ability, cooperation and teamwork (Cedefop, 2021). The National Agency for Higher Vocational Education (NAHVE) plays a key role in the implementation of the SeQF and has published a manual for the design of qualifications (Cedefop, 2022). In addition, Sweden has included entrepreneurship capabilities in all education and training levels, including VET, and provides entrepreneurship training for VET teachers (Cedefop, 2023b).

Conclusion

Our review paves the way for the research reported in the next chapter. 'Translation' is the guiding metaphor for the project.

The value of the concept is that it assumes that something expressed in one way (in Training Packages) needs to be expressed in another way to serve an audience (students, educators, employers). Training Packages – the primary Training Product referenced by the providers in the study – certainly cannot be given to students directly.

A process of reading, analysing and interpreting is necessary to unlock the value of the Packages. Translation is an appropriate lens through which to view the way providers interact with Training Packages to support learning.

The review indicates that within the translation literature there is a difference between a model that emphasises the effort to maintain the 'same' meaning through the translation process, and another that emphasises the power of context to transform meaning.

For this study, the difference between these models provides a helpful set of reference points for analysing provider translation practices. We will return to this difference in the Discussion and implications chapter below.

The review shows that outside Australian VET, the activities of translation are regarded from the perspective of 'curriculum'. We noted that before the training reform era in Australia, curriculum was a common term and that quite sophisticated processes of occupational analysis and curriculum making were in place.

In addition, government funded research reported on curriculum in VET, highlighting good practices but finding areas for improvement (e.g. McBeath, 1986; Parkinson & Broderick, 1988). The advent of CBT saw curriculum theory and practice pushed to the periphery of Australian VET research and policy.

However, the core concerns of the curriculum body of knowledge are present in VET regardless of the vocabulary and debates of the sector. In the Discussion and implications chapter we return to this point.

Australian VET operates in a larger education and training ecosystem in which curriculum is understood as a useful concept. The concept is important for understanding the work providers and educators do with national statements of learning outcomes as critical for the integrity of systems.

In Australian schooling, a national curriculum framework is in place that responds to a high level vision for schooling and importantly, is designed with a view to system, school and educator interpretation. Educators in that system are expected to actively read, analyse and interpret national frameworks, and arrangements are in place for this work to be undertaken on a collaborative basis within schools and systems.

In terms of this research project, what happens in the schooling sector led us to be sensitive to collaborative practices in which the products of translation are shared and challenges addressed collectively.

Australian higher education also leverages the curriculum body of knowledge to understand and shape practice. What struck us in our review of this work is that professions tend to express their ideals of practice and knowledge in the form of standards or competencies, and HEPs build curriculum in response.

What is noteworthy in this approach is that the professional knowledge of educators is respected and they are entrusted with the work of determining the structure of the curriculum response. In other words, within the relatively open framework of higher education course design, educators and providers determine the relative focus on disciplinary knowledge, or professional identity, or technical skills.

Unlike the CBT model, a single approach is not mandated in higher education, allowing the specific character of each kind of professional expertise to be directly addressed in curriculum.

Although it is beyond the remit of this project to explore alternative architectures for expressing vocational expertise, we were aware that, like practitioners in higher education, VET educators possess substantial expertise in their own industries and therefore would have views about how well the Training Package architecture facilitates excellence in building the skills and knowledge in each industry sector. The Challenges section of the Findings and analysis chapter below touches on this topic.

The review of VET systems in selected countries raised a number of significant points of comparison relating to the definition of competency, the emphasis on lifelong learning, degree of provider and educator input into formulation of statements of learning outcomes, extent of system recognition and support for curriculum development and level of training for VET educators. We summarise these points here.

Regarding the concept of competency, we have reviewed the sophisticated perspectives articulated in the systems of Scotland, Sweden, Germany and Singapore. It is noteworthy that in these systems, the definition of competency is considered a matter of continual debate and revision as their social and economic situations evolve. In contrast, the definition of competency shaping Australian VET has not been revisited or revised for decades.

A major difference between this definition and those which have evolved in those other systems is that in ours there are no references to attitudes, ethical values, or interpersonal attributes in the definition and little direct guidance on how to envisage personal competencies (Misko & Circelli, 2022).

In addition, the use of job tasks and roles as the main organising principle for Training Packages does not consider the needs of learners or approaches to building qualifications (Lilly, cited in Misko & Circelli, 2022). This contrasts with the occupational principle used in Germany and occupational clustering approaches used in other countries to support career mobility (Wibrow & Waugh, 2020).

The second difference we observed is the clear pathways the four countries provide between VET and higher education to support lifelong learning. A notable feature of the Swedish VET curriculum is the advent of ‘vocational packages’ or clusters of partial qualifications agreed to by industry in a field of study and designed to meet students’ specific training needs.

The aim of these packages is to re- and up-skill people over 20 years of age who are unemployed or have not completed upper secondary education or secondary vocational education (Cedefop, 2022). These pathways operate as entry points into the labour market as well as a

way to gain a qualification while working and as a pathway to higher vocational or higher general education (Cedefop, 2022).

In 2021, eighty packages covering a range of vocational areas offered competencies that could build towards to a full qualification (Cedefop, 2022). This supports research by Wibrow and Waugh (2020) who found that units of competency (or other equivalents) are increasingly designed more flexibly in other countries to allow quicker responses to emerging skills needs.

Germany has multiple pathways for VET students (Deissinger & Melnyk, 2024). Students studying a trade can progress to Meister (master) status, considered to be fundamental in trade sectors. They can also progress to other higher vocational programmes at bachelor's level, but not to universities or universities of applied sciences, unless they complete an aptitude test and three years of professional practice.

Alternatively, they can undertake additional general education during their vocational stream to gain eligibility (OECD, 2023b). The recent introduction of a 'Bachelor Professional' and 'Master Professional' qualification has closely aligned VET Meister qualifications with higher education (Wittig, 2021).

Singapore's TAE system also provides multiple upward pathways for graduates to continue their education. The Workforce Skills Qualifications (WSQ) system was designed to prepare the workforce for lifelong learning and to adapt to changing technological and economic environments. VET graduates can progress directly to an applied or regular university. Two dedicated VET universities have been established to provide these pathways and non-academic/aptitude-based admissions into universities have been strengthened (Legislative Council Secretariat, 2022).

Scotland has developed a framework to support the development of career management skills at all levels of education based on the European Framework of key competencies for lifelong learning. This framework identifies eight key competences: a healthy and sustainable lifestyle, employability, active citizenship and social inclusion and recommends ways to promote competence development through innovative learning approaches, assessment methods and support for educational staff (European Commission, 2019).

According to Barabasch (2017), competencies needed for career adaptability include control, curiosity, commitment, confidence, maintaining a positive and optimistic attitude to the future, personal change management and coping with uncertainty.

The strong emphasis on lifelong learning in the four countries emphasises the challenges Australia faces with curriculum architectures that differ between VET and higher education. Research shows increasing demand in Europe for VET programs with strong lifelong learning pathways and declining demand for shorter, practical VET programs at upper secondary level (Cedefop, 2020).

The third difference we observe is that the countries with strong linkages between VET and labour markets and strong employer involvement (e.g. Germany and Switzerland) bring multiple stakeholders together through different tripartite mechanisms to set national standards and the content and structure of VET curriculum (Grubb, 2006).

Employer, industry association, union and education stakeholders are directly involved in curriculum decisions at national and state levels (Gessler & Howe, 2015), which then filter down through various structures, mechanisms and levels of governance to VET providers who translate them into curriculum at local levels. In Germany, a national steering group (the Bund-lander-

Koordinierungsgruppe) oversees Germany's national qualifications framework and is comprised of stakeholders from higher education, schools, VET, social partners, public education, the labour market, researchers and practitioners,

In Sweden, where few professions are regulated, most qualifications are determined by stakeholders and social partners through several rounds of consultation. If a new subject or a revision is required, the National Agency for Education organises an extensive review to inform relevant parties of the decisions. Focus groups of teachers and learners are consulted and results are published on the agency's website to obtain further input from stakeholders (Cedefop, 2022). Before final decisions are made, the Agency obtains feedback from other national agencies, interest groups, social partners and stakeholders (including school organisers).

Apprenticeship curricula in Scotland starts with a framework that specifies the content and delivery mode for a qualification, based on relevant National Occupational Standards (NOS). This is further developed by SDS in partnership with employers, employer groups, relevant trade bodies, trade unions and other key stakeholders. Scotland also hosts curriculum roundtables for FE college teachers and managers to discuss the practicality of subjects, how to improve the relevance of curriculum and teaching approaches and strategies to improve student welfare, motivation and engagement (Scottish Government, 2023).

While Australia's VET system is characterised by strong linkages with employers and the labour market, the difference with Germany, Sweden and Singapore in particular is that significant curriculum decisions are shared with VET providers in these countries and educators' contributions are highly valued (Renold et al., 2018). This reinforces Misko and Circelli's (2022) argument for a stronger role for providers in the development of training packages to make them easier to understand and therefore easier to translate.

Our fourth observation concerns the guidelines for curriculum design and implementation provided by these countries. Germany, Scotland and Singapore put emphasis and resources into helping providers develop curriculum to the extent of recommending learning resources and activities known to develop transferable skills and enable individuals to think critically and solve problems in novel situations (Schaab, 2020).

The ITE curriculum in Singapore specifies real-world applied and experiential learning (Tucker, 2016), Scotland's CfE refers to interdisciplinary learning (Education Scotland, 2020) and Germany has adopted interdisciplinarity and active learning and business processes (rather than task-based technical competences) as design principles (Cedefop, 2023a). Germany and Sweden both have significant amounts of work-based learning, especially in secondary school VET curriculum (Cedefop, 2020), leading to smoother transitions to employment for students.

Our final observation concerns the development of VET educators. Like Australia, Scotland has instituted standards for VET teachers, but the Scottish standards articulate a vision for the FE teaching profession that includes curriculum expertise as a clear expectation of professional practice and knowledge. Standard 2 focuses on knowledge and understanding, both of the 'rationale for', and 'capability to' design, plan, develop and deliver curriculum effectively and efficiently, both individually and with others (Clause 2.2.2). It also expects educators to critically evaluate curriculum (and its resources) to ensure student, industry and national needs and priorities are met (Clauses 2.2.8 and 2.2.11).

Vocational educator preparation in Sweden includes a core of education methodology, particularly teaching knowledge and skills and, in addition, educators require certification by the

National Agency for Education (Cedefop, 2022). Their continuing professional development is regulated by agreements between social partners. Germany has the most complex VET educator training system requiring VET educators to obtain a master's degree, a minimum of one year of relevant practical experience in a subject specialisation, and at least 18 months of practical training (leading to a minimum of 7.5 years) before admission to the VET teaching profession (Deissinger & Melnyk, 2024). As apprenticeships have traditionally been the major sub-system in VET, teachers have been mostly trained in this area, but more recently are being trained to the broader concept of 'knowledge of practice' (Deissinger & Melnyk, 2024).

These comparisons show that successful implementation of curriculum requires an in-depth understanding of how VET educators make curriculum and pedagogic decisions (OECD, 2022) and judgements about competence and the skills, knowledge and capabilities they need to do this well.

Each comparison suggests questions for interrogating the data collected in this project. Most are picked up in the next two chapters where we analyse and conceptualise the complex work of providers and their educators as they translate Training Packages to support learning for diverse student cohorts and rigorous occupational knowledge and skills.

Findings and analysis

In this chapter we describe how the providers we interviewed go about translating Training Package content into courses and learning resources. We start by analysing the purpose or vision for each course as this is an important reference point for understanding translation. We then describe the process in three phases:

1 Pre-translation: processes leading to decisions to develop a new or existing course or learning resource and the sources of information that influence them.

2 Translation: processes involving interpreting Training Package content to make decisions about course design, and to develop learning resources and prepare learning sites, and

3 Mobilisation: the use of products of translation through teaching and learning and their ongoing review, evaluation and improvement.

While these phases are presented as distinct and sequential translation activities, in practice they overlap and continuously interact with each other as design and development decisions are negotiated. The chapter concludes with a discussion about challenges of translation currently experienced by participating providers.

Course purposes

Differences in purpose are evident across the three qualifications, particularly amongst providers of the Certificate II in Rural Operations (Cert II) and Certificate III in Agriculture (Cert III) offerings. In contrast, the Certificate IV in Veterinary Nursing (Cert IV) providers tended to describe similar course visions. Although the relevant Training Package is a common starting point for design work in all three cases, after local information about industry and students is collected, a sense of purpose unique to each provider and course pervades this activity. The purpose is explicit and aspirational for some courses and assumed in others.

Certificate II in Rural Operations (AHC21210)

Across Australia the Cert II is used for a variety of purposes including a significant amount of delivery to secondary school VET students. The four providers in this study deliver mainly to students experiencing some sort of educational disadvantage as trainees or other learners in remote locations, early school leavers, incarcerated people, or members of Indigenous communities.

Overwhelmingly, their Cert II provision focuses on inclusivity and developing individual capability to pursue education pathways into productive work and lives. The Cert II consists of 3 core and 12 elective units. Up to 7 units can be selected from the Agriculture, Horticulture and Conservation and Land Management (AHC) Training Package, and up to 5 from other endorsed Training Packages of Accredited Courses. All four providers explained that they chose the Cert II because its unusual design flexibility allows them to support the needs of individuals as well as local communities. For instance, an educator explained the value of being able to import units from other Training Packages into the Cert II:

> "The main industries we have in our region or our shire, number one being agriculture; the second one would be mining; and the third one would be engineering and local industry around town. So we'll try and cater mainly for agriculture and mining, and then the local industry in town, we'll cater for that.…If you have a look at the Certificate II in Rural Operations, it's a pretty open [flow] where you can import other units from any other recognised Training Package. Now that just opens up greatly because you can import units there from the automotive industry, from the AUR Package or the Engineering Package to fit in there as well." (Educator, Site 9)

Another Site working with educationally disengaged young people explained that they chose Cert II for their program because:

> "It was so broad. Because [the students] liked welding. They liked being out. They liked the automotive side of things. They liked a bit of work with animals. It was just a nice broad range of electives and then the core units related to all our talk about employability skills that we do all the time. So, it just sort of fitted it. It was a nice matching of philosophy and the things that we were doing already, and the interests of the kids." (Senior Education Leader, Site 12)

The flexibility of the Cert II also makes it an ideal vehicle for the providers' pedagogical approaches. Staff at one provider explained their commitment to a 'strengths-based' philosophy which shapes every aspect of their provision. The founders of this organisation are highly experienced in education and community roles and believe that schooling and mainstream VET systems repeatedly fail a certain cohort of young people. They built their organisation to provide a safe, accepting space for disengaged young people, thus meeting their emotional and social needs in unique ways. The Cert II qualification answers these requirements with its practical focus and wide range of elective choices that can accommodate the needs of the particular mix of industries in that region.

A second, large provider offers the Cert II alongside a range of courses for major industries, including mining. The Cert II was unique at this provider in that it is offered in schools and corrections facilities in regional areas and in remote Indigenous communities. The CEO has made a commitment to serving regional communities through the Cert II, and staff expressed pride in the positive impact of the program. This impact was couched in terms of enabling students to find work, although training staff focused more on serving as role models and developing respectful relationships with and between students. As one senior staff member explained:

> "I think, for me, doing that stuff - training kids, training adult incarcerated persons - it's rewarding stuff that we do. We do a lot of stuff in mining and other stuff but these are ones that you can be passionate about." (Education Manager, Site 9)

A third provider offered the Cert II in schools, for trainees on cattle stations, and in Indigenous communities. In the latter case, the provider sought to meet the needs of each remote community. The flexibility of the Cert II was leveraged to ensure that the selection of electives suited local environmental, economic and social conditions so that graduates could serve their community and strengthen it over time.

Individual students benefitted from the arrangement, but it is noteworthy that whole-of-community development was the primary goal of this course design. For example, the course could cover aquaculture, horticulture, conservation and related skills, including four-wheel drive training and recovery, quad bikes and side by sides, and small machinery operations (such as chainsaws),

biosecurity, sacred site clean-up and maintenance, weeds and their chemical control, pests and feral animal control, euthanising animals and the needs of Indigenous ranger groups. A coordinator from this site described the unique value of the Cert II to their communities:

> "I would say that a lot of people in the south underestimate its importance to Northern Australia and the ability of people to be able to access training that they wouldn't otherwise be interested in or committed to. It creates a pathway, pathways to employment, as you say, across a wide range of groups. It engages some of the least – sorry, it engages some of the most disadvantaged people in the country and the most remote and regional people in the country in training." (Senior Education Leader, Site 11).

The fourth provider delivered the Certificate II in Rural Operations in two different settings including in a rural correctional facility. This provider infuses the design and delivery of this qualification in both settings with a social justice ethos. The educators are deeply committed to providing students with a broad set of basic skills to improve their opportunities to find work and succeed in life.

Many of these students are Indigenous and have low levels of language, literacy and numeracy (LLN) and require significant support and encouragement to complete a Certificate II level qualification. Educators spend a lot of time and effort interpreting tasks and outcomes to students in ways they can understand and relate to. Educators also provide as much practical, real-life learning and assessment experiences as possible on the small cattle farm run by the provider.

The flexibility of the Cert II is key to success for all four providers as it can be tailored to suit a wide range of rural contexts and student needs and interests. Safety is a major consideration in the design and delivery of this qualification since many units involve potential risk of injury from livestock, equipment, machinery, vehicles and chemicals. The safety unit (Participate in work health and safety processes) is always among the first to be delivered. The four providers also emphasised the importance of selecting the right educators for the Cert II. They tended to be older and keenly aware of the interests, tolerances and backgrounds of their students. Teaching was characterised by the use of stories, games and practical demonstrations and allowing ample time for students to learn how to use equipment and materials:

> "What we loved about [our] trainers was that they were sort of like old bushies and they talked. They had the stories, and they'd be sitting around and, 'let me tell you about the time I sprayed. The mix was wrong, and I killed off the whole paddock'. Or someone got sick. Then a little bit of writing. It was lovely training. That was because they were – the trainer was the whole package, and that was lovely. The stories were great, and the kids were sitting around and listening to the stories and every now and then they'd write something down." (Education Manager, Site 12)

Certificate III in Agriculture (AHC30116)

Unlike the Certificate II, the four study sites teaching the Certificate III regard the qualification as a solid foundation for a career in Agriculture and for further learning in the agriculture qualifications suite. These providers use a wide range of learning resources and activities to meet the needs of their students who are focused on their current and future farming-related careers.

The Cert III consists of two core units plus 14 elective units. Although over 200 elective units are available for inclusion, three of the four sites chose to offer little or no elective choice to students, having designed similar, and what they believe are optimal versions of the Cert III to prepare

their students for a carefully considered range of agricultural careers in their regions. As one educational designer and educator put it describing a standard conversation with an apprenticeship parent/employer:

> "Well why are you teaching my kid about livestock when we don't have any sheep or cattle?" Okay, you go, "Well, hang on, it's not just about you and today. This is about the student and what might happen in the future. So if you've got any respect for the kid, then let's give them a more well-rounded suite of competencies that they can then take with them and morph into whatever else they want to do." (Learning Designer, Site 8)

All four sites offer the Cert III as one step in a pathway leading to higher qualifications with two providers offering pathways into their own degrees. These Cert III providers design and deliver their Cert II, Cert III and Cert IV in Agriculture courses as an integrated suite.

All Cert III providers articulated a distinctive course rationale aimed at developing enduring capabilities that learners need to navigate life and work. Such capabilities are not necessarily seen by provider staff as being well represented in the Training Package. As one provider with a long history of providing agricultural training in the region explained:

> "The other thing we do is a lot of additional work around what it is like to live in communities, what are safe relationships, how do you deal with issues of consent – all that wrap around stuff about student welfare, living in community, being an effective team member and part of a community when they leave here. We see them contributing to a rural community, not just working on a farm. We do a lot of additional work with our students around what it is like to live in communities." (Senior Education Leader, Site 6)

There was a clear personal development component in this purpose linked to a view of what graduates should be able to contribute to their industry and community. Like other providers in this study, this provider deliberately delivered what they saw as 'above and beyond' the Training Package to develop a rich curriculum. Its Cert III was made available in different versions to meet the needs of three different student cohorts: entry-level students (mostly school-leavers), trainees (studying while they work on farms) and existing adult workers seeking to update their skills and knowledge through short continuing professional development courses. Each version of the Cert III shared the values of the provider while incorporating content and training approaches attuned to the particular profile and needs of each cohort. The entry-level version of the Cert III allowed little or no elective choices, whereas the traineeship version they offered was more flexible to suit the specific requirements of employers of individual trainees and the CPD version, which enabled workers to build a qualification unit by unit, was designed to meet local demand.

Another Cert III provider with a long history of training in their region also held a clear vision of the kind of Cert III graduate they wanted to produce:

> "We expect them all to do everything, whether you're working full-time, whether you're working part-time, whether you're a school-based, and whether you're on a dairy or a beef or a sheep farm. The philosophy … is that they're a movable group, that younger clientele, that sometimes they might be on a dairy and they get sick of milking cows and they might go off into a sheep farm, or they might be on a sheep farm and think, "Oh, this is too hard or too soft or uninteresting, sick of that. I'll go and do some shearing." (Learning Designer, Site 5)

Historically, this provider pioneered continuing agricultural education and still offers fee-for-service short courses nationally. They have explicitly positioned the Cert III on a clear pathway from Certificate II to Diploma and degree programs (the latter through an arrangement with a higher education provider). Students receive the message that working in agriculture demands continuous skill development and lifelong learning alongside the acquisition of specific skills described in the Training Package.

A third provider of the Cert III also boasted a history of service to their local region. This provider has an intergenerational connection with the community. For example, at least two of the educators interviewed had themselves been agriculture students at the provider, and local families could count multiple generations that had graduated from its courses. This intergenerational connection was a source of input into course design and revision.

The selection of units by this provider has evolved to meet the needs of regional agricultural industries including regulatory and safety needs. For example, they deliver units AHCCHM 304 and 307 to allow students to obtain their agricultural chemical user permit (ACUP). They also provide units that cover operation of common farm vehicles because many employers will not allow trainees or work experience students to work without having completed this training. Similarly, Work Safe considers evidence of this formal training in cases of accidents. The selection of electives supports horizontal as well as vertical pathways, particularly into the Certificate III in Dairy, a large industry in its region.

The fourth Cert III provider is distinctive for its contemporary focus reflecting a whole-of-organisation strategic commitment to clean energy, the 'circular economy' and sustainability. These goals are woven into its Cert III course design, and educators articulate their importance for the future of agriculture. Due to its location, most students entering the Cert III come from the nearby city and have no prior experience on farms yet aspire to agricultural careers. The course is mainly delivered on a teaching farm owned by the provider. The educators feel some tension between the selection of units for the Cert III and the skills needed in its local area, where there is significant demand for egg farming and glasshouse-based fruit and vegetable growing rather than the pastures, crops, sheep and cattle generally supported by the Cert III. One of the educators mentioned that they have 'egg producers and tomato producers ringing [them] up wondering where they can get people from, saying "they're desperate for them"' (Educator, Site 7).

The educators at this provider, who possess substantial agricultural experience and expertise, see their current Cert III course as a broad-based agricultural education and feel that additional skills, locally in demand, could be met by accessing other facilities belonging to the provider such as its production glasshouse and beekeeping classroom. Three priorities influenced the vision for the Cert III: the need to be differentiated from other providers, Training Package requirements, and 'the rhythm of the farm.' This provider does not stipulate any pre-requisites for their Cert III and strongly encourages graduates to go on to complete the Certificate IV in Agriculture, which in turn is a pathway into the provider's Diploma and higher education programs.

Certificate IV in Veterinary Nursing (ACM40418)

Unlike the multi-destination Cert II and Cert III qualifications, the Cert IV is intended to prepare learners solely to be veterinary nurses: '…to provide nursing care to animals, to support veterinarians to carry out medical and surgical procedures, and to support clients to maintain

health of animals' (https://training.gov.au/training/details/ACM40418/). This is reflected in the more prescriptive design of the Cert IV qualification which consists of 17 core and 4 elective units.

Collectively the four study sites offer the qualification on campus and/or online (including internationally) with students learning veterinary nursing practical skills in training clinics on campus and/or through work placement or employment in professional veterinary clinics.

The four providers differ in size, facilities, delivery methods and student cohorts, but are closely aligned in their educational ethos and focus on professionalising veterinary nursing education through scaffolding learning on strong veterinary science foundations as well as clinical practice. A Site 2 educator described veterinary nursing work as:

> "a crazy combination of having to be very scientific and medical, very technical and research based but also it is very, very practical." (Educator, Site 2)

The Cert IV providers all expressed strong commitment to building the professionalism of veterinary nursing practice. One provider (Site 2) was founded by a former veterinary nurse who, with her colleagues, felt unprepared for the industry, particularly for coping with the stress of clinical work. This provider offers a comprehensive, wholly online course available only to learners employed in veterinary practices. They describe the expertise they aspire to for veterinary nurses:

> "We want every nurse in a clinic to be competent and confident and a positive driver of good health care for animals." (Educator/Learning Designer, Site 2)

A staff member explained that they support the development of nurses' professional and interpersonal skills by prioritising student and industry learning needs over compliance and exceeding the skills and knowledge prescribed in units of competency.

Another provider (Site 3), a small, specialist animal care provider, offering veterinary nursing on campus and online, applies a similar emphasis on scientific and interpersonal skills in its selection process:

> "we will look at trying to find a minimum of Year 12, including some maths and science. Workplace history, customer service, person interviews, how they do in the LNN [diagnostic assessment]." (Educational Manager, Site 3)

All four providers described a much stronger theoretical knowledge base for veterinary nursing than was the case for the other two qualifications. Provider commitment to building learners' theoretical knowledge exceeded the minimum requirements specified in the Training Package.

For example, Site 4 provider is a large company providing veterinary nurse training as one of a range of products and services it offers to the veterinary industry. This provider has around 750 students in Australia and approximately 100 in Asian countries. Like the other providers Site 4 draws on internationally standard veterinary nursing textbooks, research articles and similar sources to teach a substantial body of knowledge:

> "we provide a good level of underpinning knowledge … I see the difference in practice, and I truly believe that our graduates come out with more underpinning knowledge than other qualifications…and understand a little more about the 'Why are we doing this?'." (Educator, Site 4).

At each site the providers' focus on building underpinning knowledge and the interpersonal skills needed in practice was supported by a strong educational ethos. This was evident in the language used in the interviews. Unlike staff involved with the other two certificates, veterinary nursing

managers, learning designers and educators tended to describe themselves as educators rather than trainers, refer to educational theories and emphasise their own educational credentials. For example, the educator who founded Site 2 described her journey to acquire the skills she identified as necessary to design the course her organisation delivers:

> "I decided that's it – I'm just going to start writing the courses. I had absolutely no idea where to start so I did the TAE and as we know that doesn't really set you up for the good development of courses. Then I literally just started writing what nurses needed to know and how they should be delivered…I wrote what we thought and then mapped it to the qualification and found the gaps and filled them in…I went off and did my bachelor degree in Adult Education and then did post-grad quals in clinical education and those have both contributed to how we now put the courses together." (Senior Education Leader, Site 2)

Similarly, a senior leader at Site 1 described the value of veterinary practice and educational experience for teaching:

> "our staff are highly qualified industry people, but they are different stages of their educator journey…[we] just recently hired some new staff that they have just got their TAE and they're only still starting out as an educator and then we've got some people that have been in the education game for a very long time. They have you know uni qualifications etc and higher quals…we're looking at really drawing upon them as subject matter experts and then bolstering when needed their educator support you know how to how do I look at this not as a vet nurse but how do I look at this through educator's lens and I think that's where our quality teaching learning department assist as well because they're not subject matter experts but they're fabulous educators and can really enhance that education side." (Senior Education Leader, Site 1)

Veterinary nursing educators also described their commitment to their own continuing professional development, for example by participation in industry organisations (Site 4) and presentations at conferences (Site 1). The providers' commitment to professionalisation reflects the traditional professionalism of veterinary practice and the growing professionalisation of veterinary nursing over the last few decades. Veterinary nurses are now required to be registered in Western Australia and the providers reported interest in further regulation:

> "There's a big push for mandatory regulation…There are more and more veterinary nurses becoming qualified and certainly in the last 20 years since the training package since the national qualification came in in 98. So, you know, 25 years. There has been a much bigger push for people to employ qualified veterinary nurses. It is a lot harder now to get a job without a qualification, whereas previously you didn't need one." (Educator, Site 4).

All four Cert IV providers shared this enthusiasm for improving the veterinary nursing occupation and its status and its importance in the wider industry. The body of knowledge of veterinary nursing was the primary reference point for course content, with the Training Package being used to shape high-level structure in the design of resources but not necessarily to determine the range of knowledge and skills students need to develop.

Comparing purposes of the qualifications

The differences in purposes of the three qualifications are summarised in Table 1.

Table 1. Summary of course purposes and visions

	Certificate II in Rural Operations	Certificate III in Agriculture	Certificate IV in Veterinary Nursing
Purpose	Student empowerment (3) Community empowerment (1)	Developing knowledgeable, adaptable, agentic agricultural workers, community members and lifelong learners (enabled through an explicit pathway of linked qualifications)	Developing knowledgeable, deeply skilled veterinary nurses with a distinctive and important role in veterinary health.
Training Package use	Electives chosen to reflect local industry and community needs and opportunities	Electives chosen in conformity with vision for graduates and deep knowledge of regional needs	Few electives available with choice determined by typical clinical practice

In the Discussion and Implications chapter below, we discuss these purposes in the context of the VET QRDG articulation of VET qualification purposes.

Course and resource design and development processes

While the current course purpose or vision could readily be described by each provider, the original decisions leading to its development are not always known or recalled in detail. However, most providers in this research follow a documented course and resource development process but with varying degrees of formality and detail as mentioned earlier. Some had been delivering their course for many years, including provision of similar courses predating the introduction of Training Packages.

Larger and broadly focused providers used more complex and formal processes and the smaller providers we studied tend to use less formalised but no less rigorous processes. Their 'rigour' comes from their close relationships with industry and/or student cohorts and their clear and confident knowledge of these stakeholders. In larger providers the translation process is usually overseen by a formal governance model, which – as in HE providers – incorporates structures such as a formal academic board, course advisory group with industry representation or quality committee or team of senior managers. In smaller providers, governance could include industry advisory groups but is often exercised by senior managers and quality experts in consultation with industry partners.

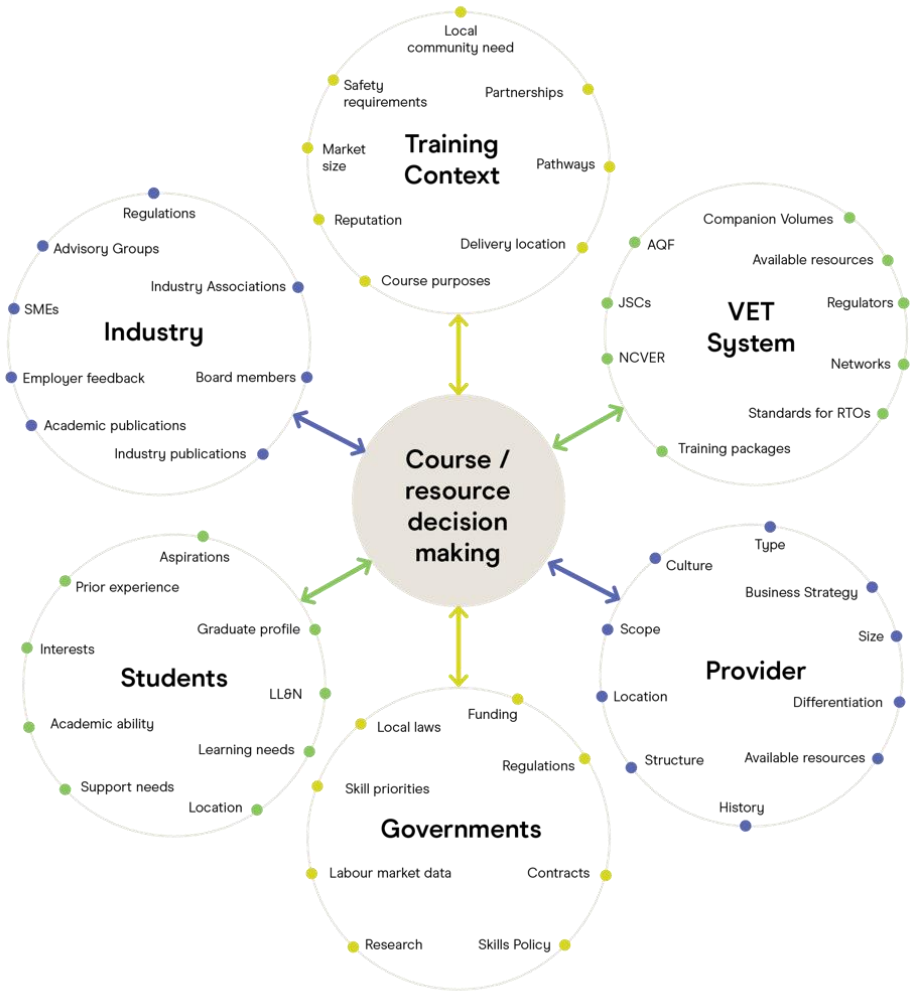
The translation processes supporting course and resources design and development in the 12 providers we studied were complex. We could distinguish major phases, beginning with a 'pre-translation' stage that culminates in decisions to create or change courses and/or resources. These decisions precede translation proper, where Training Packages and other products are read, analysed and interpreted. Interpretation underpins selection of electives (Framing), grouping and sequencing of units (Structuring), both course-level translation processes. Interpretation intensifies in

the production of learning resources (Elaboration) and the preparation of learning sites (Organisation). The products of translation are mobilised in learning environments that display varying degrees of resource-led and educator-led learning. Pre-translation, translation and mobilisation can be considered components in a model that we present at the end of this chapter. In the sections below, we summarise and analyse findings relating to these components.

Pre-translation: course decision making

All the providers interviewed use multiple systems and processes to collect information about industry, students, government policy and resourcing and the VET system itself, and to analyse this information to determine a need for a new course or a modified, expanded or articulated existing course or learning resource(s). We summarise the sources of information that influence their decisions in six fields (Figure 1), noting that not all providers drew on all the sources mentioned.

Figure 1: Influences on pre-translation decision making



The way providers negotiate a balance between these multiple influences and decide whether to develop a new course and/or resource(s) is moderated by their type, structure, strategy, size, focus and history and proposed training context. Each provider therefore approaches pre-translation in a different way and has developed its own version of a qualification with a unique

history and character depending on which sources have been most influential (especially local factors) and how they are interpreted, balanced and combined.

One of the most influential sources of information is **industry**, particularly for the Cert III and Cert IV qualifications under study. Much of the industry-related information is collected and analysed by providers at two levels:

- The broad national level, drawing from state and national industry, employer, government, union and VET bodies, including JSCs and NCVER, labour market data and research and other literature focused on these industries
- The local level, drawn from industry (farmers, employers, veterinary clinics, etc.), students, authorities and communities.

The broad national information is collected formally via systematic environmental scans and other research, feedback from industry associations and participation on regional, state national industry committees in some cases. Larger providers tend to have formal systems, processes and specialised teams to do this work. Whereas smaller providers with a more focused profile adopts more informal methods, although they too can be well connected at regional, state and national levels.

At a local level, industry intelligence is collected via a number of ways. Formally, some of the larger providers have centres for industry engagement and/or industry liaison roles and all interviewed have industry or course advisory committees and utilise surveys to obtain regular employer input. For example, for one large provider:

> "one of the things we do to get information from industry is run industry collaboration reference groups (ICRGs). My first one was a year ago on digital Agriculture and where digital agriculture is going. What's out there and how do we incorporate that into our agriculture programs?" (Senior Education Leader, Site 10)

Information about industry is also collected in less formal, ad hoc ways by senior managers during their interactions with industry and by educators in their daily work with employers and students. Most of the educators interviewed are subject matter experts (SMEs) themselves and are working in industry and also training and assessing in real-life farm and veterinary clinical environments. They are seen by providers as primary sources of industry information:

> "Our staff have KPIs around reporting changes in industry because they are all working in clinic as well. We don't have anyone who is not currently in industry. They might hear about a new orthopaedic procedure for example. Not all clinics will do it. So they will go and do some research on it and summarise what that is and give us a link to the information and say this needs to go into your surgical course. Sometimes that stuff may not meet a unit requirement or be relevant [to it], but it is still important for nurses to know." (Learning Designer/Educator, Site 2)

> "I also am involved with the [peak body]. The [peak body] is always involved when there's Training Package reviews that have come up over the years, and we will look at what the changes might be to the Training Package. So that's a separate 'hat' to what I am with [this provider]. But if I look at it from, I guess an industry point of view as how that actually works for what is needed in training in veterinary practises for veterinary nurses, whereas I guess my RTO hat is definitely still look at that, but it's a little bit different. It's about how we have to develop our training and how what assessments and rules of evidence and

everything that we have to actually apply. So, I sort of switch my thinking a little bit between those two." (Educator, Site 4)

External subject matter experts are another valuable source of industry insight as are employers who give feedback on the knowledge and skills (including employability skills), attributes and attitudes of the students or graduates they employ or host for work placement:

> "You know, when we did the arboriculture…we were working with industry, we were working with external SMEs. Yes. So we went, off we go. And we worked with a great world-renowned arboriculture expert. And it was fantastic. So we just went crazy. We could just do what we wanted, really. And it's come [up] with a really great product." (Senior Education Leader, Site 7)

Information about **students** is also important for the providers we interviewed and was the first priority for those offering the Cert II. While an industry focus is still valued by these providers, their priority is squarely on meeting the needs of individual students. If they do that well, blending job-related skills with individual capability and personal development, they feel they are contributing to local industry and communities and, in the bigger picture, to achieving government priorities. Some providers work with, and emphasise, specific aspects of Training Package specifications to ensure that they meet the needs of their students:

> "those skills like communication, leadership, problem-solving . . . we are really zeroing in on these now with our students." (Senior Education Leader, Site 5)

Similarly, several providers described what they see as going 'above and beyond' Training Package specifications to support aspects of competency, especially personal competencies, they believe are critical for students in the medium and longer-term.

Information about students is collected and monitored via various formal and informal mechanisms from pre-enrolment through to graduation and beyond. Larger providers systemically collect data and other information from their learning, student management and other digital systems and use surveys and focus groups to obtain graduate and student feedback. Smaller providers use scaled down information gathering methods but are more closely connected to their students, communities and employers and can monitor their progress and welfare more informally on a regular basis.

The **training context** is the third major influence on pre-translation decision-making. It overlaps both industry and students as influences, but is distinctive for a local focus. Local market-size is a particular concern for the providers in this research, who were often contending with the challenges of 'thin markets.' Local intelligence gathering was critical in these situations.

Cert II and III providers in particular were especially attuned to local and regional community priorities and economic conditions. Local employers are important here too both as members of the community and in their capacity to articulate industry imperatives and economic conditions at local and regional levels. Employers and other community groups in many cases partner with providers over the longer term to shape course design and resource offerings. The reputation of providers within local communities is a factor in the way this influence plays out, as reputation is particularly important at the local level.

Most of the providers interviewed undertook training in a variety of locations, and relied heavily on local authorities, employers and community organisations for these opportunities. Pathways were an important consideration for some providers, and these are also conditioned by local contextual factors.

Course purposes as articulated in the previous section are in one sense a culmination of training context factors, although this aspect is closely related to the other influences, particularly the provider and its history, culture, size and scope.

The **VET system** is the fourth influential source of information for pre-translation, particularly Training Packages and related regulation and compliance requirements. Interpretation of Training Package content is always shadowed by an awareness that the result could be scrutinised by VET regulators and therefore must be approached with utmost care and diligence.

Re-registration and updates to Training Packages are the most disruptive sources influencing pre-translation decisions for participating providers, in some cases requiring expensive and protracted periods of redesign and development activity, especially when Training Package updates are significant and non-equivalent. To provide an idea of the impact of VET system influences, one relatively small provider estimated that transition to a new Training Package qualification costs them $150,000 to $200,000 and takes at least a year.

This leads to the fifth influence: **government**. Skill policy, priorities and related funding structures and sources are continually scanned by providers to reflect on training needs and to scope the feasibility and viability of a new or modified course and/or learning resource(s). The strategic use of government policy is illustrated in the decision making of one provider:

> "What do we want of the course? What does it look like now? What do we want it to look like? So a current and a future kind of state process.… We then align that strategically. So we do a strategic one, government priorities. We also look at viability, all of those things that, that, that come into it. So it's actually quite a deep process." (Senior Education Manager, Site 7)

Viability is a particular concern of providers, affecting not only the decision to create or modify courses and resources but the whole translation process:

> "Funding is based on a minimal number of units. And we end up training more and not getting paid for it. The units themselves – we might be trying to build more into them. . . . And no one wants to pay anymore and no one wants to increase the payment according to CPI either. So we get these little tweaks but I don't think we are getting the money to do the qualifications well. I always say if you are a good educator and you can get to cost neutral, you've done an outstanding job. Really - you don't make money out of it if you are doing it properly." (Senior Education Manager, Site 6)

The final influence, the **provider** itself, has a major on pre-translation decision-making and not only because the decisions are taken there. A range of factors including history, culture, structure, strategy, size, scope and preferred delivery modes shape these decisions, in both explicit and more tacit ways. These factors interact with other influences as groups and individuals reflect on whether to create or modify courses and resources.

These decisions are usually made by senior managers with advice from curriculum developers and/or educators on which courses and units of competency on scope will 'best fit' the training need and the provider's operational environment. Senior managers combine their industry knowledge and expertise with VET system and institutional knowledge.

Questions are asked such as: what is the actual training need, what type of course is required (accredited or un-accredited, small skill set or micro credential or full qualification), which units of competency are feasible, who is appropriately qualified to teach components of the course and

provide subject matter expertise, how could the course be offered (face to face, in the workplace, blended or fully online mode), what equipment, machinery, facilities and livestock will be required (and is available) and what risks and costs are involved:

> "So then we sit down to work out ways we can do this. We could do some modules but also can form a group, do webinars, group learning. Then we would think about the best way to do it – you know student numbers, who are they, what do they do, what their ability going to look like? All those sorts of things that you consider really early in the planning process. Then we go – ok – we'll start developing an online course. They give us the content and we make it work in a course… You're thinking about how it will be funded as that really impacts on the effort we put into things." (Learning Designer, Site 6)

Delivery mode makes a big difference to the way courses and learning resources are designed in relation to how much and which learning goes online, how students will use resources, how content is chunked and sequenced and how providers (and educators) communicate with students. The geography of delivery sites is also a deciding factor; in one qualification:

> "What we do on the coast is very different to what we do out west, what we do in the outback and what they do down [place name]…That in itself creates challenges in pulling together an assessment that is so broad, let alone that it goes across horticulture, equine, conservation and land management, and agriculture." (Educator, Site 10)

Decisions are also made about whether to develop new resources, customise or update existing ones or purchase or access external resources. Most of the providers interviewed prefer to develop and use their own resources and purchase external ones only when this is not feasible, due to lack of expertise, available time and/or cost. They are, however, very selective about which resources they purchase and how they use them. Feedback suggests that providers are increasingly interested in purchasing good quality external content due to the pressures of frequent of Training Package updates.

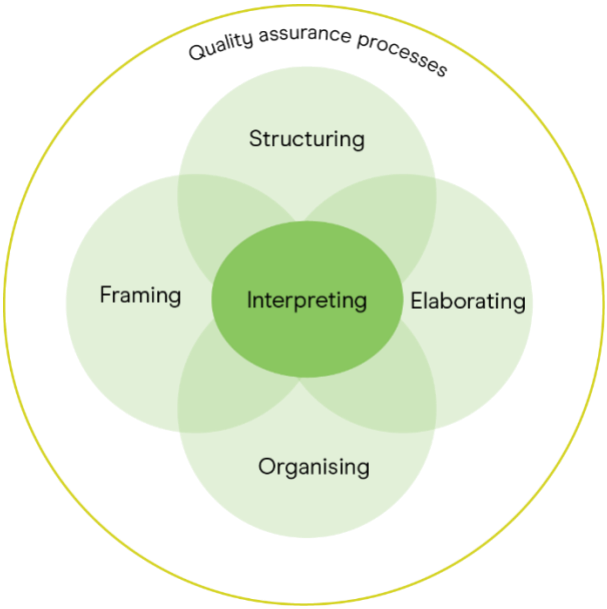
In larger providers, the pre-translation processes often result in a business case or course proposal that outlines a high-level TAS, which then can travel through layers of governance to obtain approval to proceed. In smaller providers, the process is more streamlined. A TAS might be developed as a record of the translation processes but not subjected to lengthy governance processes.

Translation: course and learning resource development

Once the proposal for a new course, a course change and/or a new learning resource is approved, the translation process begins. We identified four overlapping modes of translation that commence at this point:

1. Framing, which involves selecting elective units of competency
2. Structuring, which involves grouping and sequencing units
3. Elaborating, which goes to determining topics, developing learning content, activities and assessment resources and mapping these back to units, and
4. Organising, which involves procuring the resources and facilities required for specific learning contexts (see Figure 2 below).

Figure 2: Translation modes



Each mode of translation involves a different way of reading, analysing and interpreting Training Package rules and units of competency as described below. Although not strictly linear, artefacts of one mode of translation can determine how the other modes are conducted. Some translation processes are ongoing, such as adjustments to cater for individual workplace contexts and as embodied in VET educators who can translate Training Packages requirements to suit the needs of the moment.

Framing

The Packaging Rules, which specify the number of units that comprise a qualification, the number of core and elective units and other considerations in elective choice, are a major focus during the framing process. Framing involves some reading of elective units to determine which ones will 'best fit' the training need identified in the pre-translation phase. Table 2 shows core and elective units in each of the case qualifications. This information was central to the framing decisions made by the providers in this research.

Table 2. Number of core and elective units in the case study qualifications

Case study qualification	Number of core units	Number of electives	Total units
Certificate II in Rural Operations	3	12	15
Certificate III in Agriculture	2	14	16
Certificate IV in Veterinary Nursing	17	4	21

Decisions about elective units must take these rules into account. For instance, the Cert II mandates the following rules for selecting electives:

- At least 7 units from Certificate II in this Training Package

- 5 units aligned to AQF levels 1, 2, or 3 may be selected from up to 3 other endorsed Training Packages or Accredited Courses.

Selected units must be relevant to job outcomes in a wide range of industries and agencies in rural and regional Australia and chosen to ensure the integrity of the qualification outcome at Australian Qualifications Framework (AQF) level 2.

The interpretation of units of competency is not always detailed at this stage. Unit titles and application statements tend to guide this work for some of the providers. At one Cert II provider, the titles of units provide the main information, with closer reading being used to distinguish units and settle on a final selection. Cert IV providers have relatively little elective choice and chose electives to develop skills commonly practiced in clinics.

While packaging rules and units of competency were the focus of framing work, some providers refer to Companion Volumes for guidance on the volume of learning and industry-specific assessment, resource and industry currency requirements. Others said that these documents contain too much 'generic' information to be of use. One provider lamented the removal of 'range statements' from units of competency, which were supposed to be included in the Companion Volumes but ultimately were not.

Structuring

Once the selection of units is settled, translation addresses the question of how units of competency relate to each other. The structuring process settles how they can be grouped, clustered and sequenced into a logical course structure. This process was described this way by one manager:

> "So the first step - we read through that unit, we really read it, read through it and really look closely at the unit. Then we look at it in the context of the other units the students are doing as well. So how do we create a flow here for the students? Often, we'll deliver those three together, so they'll come and do a week block of training, and we'll do those three together because they're linked and it's a logical sequence. So, you're looking at how are you going to deliver it, the sequence and the overlap or a linking theme, and particularly with the programs that I look after, some of this they they're doing in a blended delivery model." (Education Manager, Site 6)

Structuring decisions are shaped by a number of factors including the training context, for instance the 'rhythms of the farm' (Site 7) or yearly cycles such as mustering season (Site 9). Some units naturally sequence as they obviously precede others in terms of level of learning:

> "Say livestock for example. The first two units are Identify and Draft. For sequencing they've got to do one core. They have to be able to identify the animal. That's the first step. Then the next step would be marking and potentially, yarding or drafting and the next one after that would be treatment where they have hands on the animal. Then we would sprinkle in units, depending on whether the delivery is face to face or online." (Education Manager, Site 10).

Sequencing is regarded as essential to effective learning, and several providers mentioned it as being critical because it exposes students to learning in a logical way. Units may also be grouped to satisfy industry licencing or regulatory requirements as in the Agricultural Chemical User Permit (ACUP) already discussed. Units are pulled apart and read very carefully to do this structuring work. For example:

> "We've just done a lot of delivery in motorbikes, quad bikes and side by sides for schools… So they wanted clustered assessments for those machines, and we've just finished that. So we really pulled the units apart to look for all the common components, pulled them together and they become combined sections for delivery and assessment. And then there's other parts that are specific to each of those machines. I think we ended up with six parts to the assessments and the workbook and three of those were generic to all machines and the other three were specific one to each of them and yeah, it's meeting all that and then you've got all the different Training Package requirements that plug into that." (Senior Education Leader, Site 10)

Grouping and clustering of units can be a fraught process, depending on whether it involves integrating parts of individual units (clustering) or is only a matter of grouping individual units that are related in some way. The integration of units into a cluster involves close reading of units to determine how elements can be rearranged so that none are lost, but the new structure allows more logical and/or less repetitious learning. In one Cert IV provider, the course was originally structured according to individual units, but was later redeveloped into clusters called modules. As one of the educators explained:

> "They were originally in each individual unit and then we clustered them and the bit that I did was putting them into ultimately chapters so that we weren't doubling up on material all the time, you know, like having this in here, but also here, here and here." (Educator, Site 4)

This participant drew attention to one of the main reasons units are clustered by providers: to avoid repetition. However, this provider recently returned to an individual unit-based model after students experienced difficulties completing the full requirements of a cluster and dropped out of the course. The new approach nevertheless still grouped units into 'sections' more or less following the earlier clusters, but students could complete stand-alone units and exit early with completions.

In a different solution, a relatively new Cert III provider teaching on a purpose designed farm has deliberately broken the chronological relationship between practical skills development and the associated knowledge so that learners can fully engage with the annual cycle of activity on the farm:

> "So the correlation between a subject running in Cert III and the practical associated with that …we deliberately stepped away from it and said, "No, what we'll do is we can do theory any old time," in reality, right? Most times that's mornings because everybody's awake. Then over the course of the year, you'll do everything that you need to do. For example, with fencing, we do it in winter because that's the time we always do fencing on the farm because the ground's soft. It's as simple as that." (Educator, Site 7)

Decisions about how units are framed and structured are represented in a TAS. In one large, multi-site provider, senior educators in an industry area are brought together to do this framing and structuring work. Curriculum developers then document the TAS and the industry consultation involved in its development, and it then becomes a tightly controlled 'master document' for all delivery sites. However, each site can customise resources to suit their local context. In contrast, a smaller provider had not developed a TAS at this point, preferring to develop resources first, centred on a primary document and from there create the TAS which is kept on hand for auditors.

Elaborating

The next two translation processes, Elaborating and Organising, draw on selected pre-translation influences and modes of translation to create learning resources. Elaboration refers to the work of developing learning resources as such. Close reading and interpretation of units of competency characterises elaborating processes, which are generally approached in three main ways:

1 Prioritising the content of units of competency (i.e. role descriptor, elements and sometimes performance criteria) in a step-by-step fashion. Designers with less direct industry experience tended to emphasise elements and performance criteria as these helped them to visualise what is involved in the role.

2 Prioritising assessment requirements with a focus on the knowledge and performance evidence. These participants tended to be closer to industry and found that knowledge evidence was the most instructive information in the Training Package to guide design work.

3 Prioritising desired graduate attributes and mapping them back to units of competency. This was a surprisingly common approach among the providers interviewed. One Cert IV provider scoped the topics and subtopics they regarded as essential to good practice in their industry and then mapped them back to relevant units of competency using a complex and highly detailed mapping document. This backward mapping process was also used to record and accredit practical skills obtained by students in addition to their formal course against a unit or more units by another provider.

While most providers followed a methodical approach to reading, analysing and interpreting units, there was a warning sounded about being overwhelmed by the detail they contain:

> "Don't be freaked out about the words inside the performance criteria, look at it as a whole. It's there in the units of competency. I suppose it can be destabilising to look at the whole document – the two documents, the delivery and the assessment requirements and go down a little bit of a rabbit hole because there's so many bullet points. It's hard to figure out how to put them all in." (Education Manager, Site 11)

Whether the initial emphasis was on comprehending competent performance as reflected in the unit of competency, interpreting the significance of the knowledge evidence, or going beyond outcomes specified in Training Package to meet desired graduate outcomes, all providers sought to integrate the elements and performance criteria with the knowledge and performance evidence to design topics, subjects, learning activities and learning content.

However, for participants who were directly involved in the elaboration process the process of integrating information from different parts of a unit could be a challenge, even for those with relevant industry experience. One participant explained that it was not always obvious where knowledge evidence related to the elements and performance criteria. Because the same knowledge could relate to different elements and criteria, a decision would have to be taken about what point would be the most logical to introduce a given topic.

In the process, the performance criteria might be disaggregated, rearranged, or even clustered, to allow for a more meaningful order for learners. A mapping process was used at this point to check that all requirements of the selected units were covered. This work is usually captured in the Training and Assessment Strategy (TAS) and can be complex. An Education Designer described the

complexity of undertaking this work to meet the needs of five very different learner cohorts. They described a TAS as:

> "a strategy level document that describes the component parts of a program. How? Who your learners are? What pre-enrolment process they need to go through? What learning journey they might expect to receive? How they're going to be assessed? Any work, integrated learning that comes into the training program. What electives they're going to be covering? Who's going to be teaching it? What qualifications and expertise that teacher and assessor has….So a good training and assessment strategy, a good TAS gets bundled up into cohorts where things that are true for everybody is true for the program and then aspects or characteristics or components of the program, design and strategy that are nuanced to a particular group get called out specifically by cohort." (Learning Designer, Site 11)

While the work of elaborating begins with Training Package documents, the bulk of content is drawn from other sources, including existing resources. Across the 12 providers, new resources are rarely developed from the ground up. For instance,

> "We don't often start from scratch with the course materials, we've already got a lot of content there, that then gets updated based on the Training Package that we've studied quite closely. So, all elements, performance criteria, assessment conditions et cetera. We often have discussions and debates between the course developers to interpret the package correctly. Because sometimes we find it a bit ambiguous … We'll often consult both internally and externally when developing the course material … Then once all of the course material is created, we create all of the assessments." (Senior Education Leader, Site 3)

A few providers agreed that the fundamental principles of an occupation do not change that much over time, so updates to content tend to be about changes in technologies, machinery and industry trends.

> "We try to write our publications according to the core principles and processes and foundational knowledge. So we go, this is the thinking process you need to go through to put a piece of technology onto a farm. We try to use core principles that don't change. The technology or widget might change but the thinking behind how I identify the hot spots, weak spots and problems I need to solve and how I identify the best piece of technology to solve that and how do I talk to a supplier and what questions should I be asking doesn't really change…So we try and focus on those rather than here's the latest bit of software for farm planning." (Learning Designer/Education Manager, Site 6)

Most often, units of competency and assessment requirements provided the structure and boundaries for resource design with topics aligning directly with performance criteria in some cases.

Knowledge evidence supplied the seeds for content development; the bulk of which was drawn from other sources through information gathering 'research', as some participants described the process. One explained the process as creating substantial files of content aligned to the knowledge evidence statements gained while searching the internet. Another saw research as sourcing material from well-recognised international textbooks.

This provider of the Cert IV considered that the body of knowledge for this qualification had greater scientific content than that stipulated in relevant units of competency and assessment requirements. They also felt that their students needed academic ability to know how to read and understand this content. Academic sources were seen as important as they reflected a recognised body of knowledge for this occupation. Across the twelve providers, research draws from a wide range of sources including,

- Textbooks and journal articles
- Supplier and manufacturer manuals and videos
- Industry/peak association websites, manuals and factsheets (e.g. Meat and Livestock Australia, Australian Wool Exchange)
- Industry codes of practice, regulations and rules,
- Government websites and resources (e.g. Biosecurity Australia, Grains Research and Development Corporation)
- Jobs and Skills Council resources
- Guest speakers from industry and peak bodies
- Webinars by industry representatives and other external speakers, both live and recorded
- Other resources such as safety videos, relevant news clips and U-Tube videos.

Once this material was gathered, it was then evaluated, sifted and compiled into a draft resource. In large providers central units are often heavily involved in elaboration. In smaller providers a single person or smaller team do this work. Two basic approaches were described. In the first, resource designers initially work alone to search for ideas, descriptions, explanations, diagrams, illustrations, first-hand accounts, videos, etc., of the activities, concepts and theories mentioned in the unit of competency and assessment requirements and bring in subject matter experts to review the content.

This approach tends to be undertaken by staff with little or no relevant industry experience and produces a lot of material that has to be reviewed, evaluated, and synthesised. In the second approach, designers work with subject matter experts from the outset. One learning designer explained that in their RTO a learning design team leads resource development working in constant contact with the educators through:

> "frequent check-in meetings you know those sorts of things and you know [they] are only an email or phone call if we do hit a roadblock so that's hats off to them because they are you know insanely qualified, experienced and helpful. You know there's always someone higher or a trusted colleague that you can call upon." (Education Manager/Learning Designer, Site 1)

In the latter example, learning designers were more focused on elaborating Training Package information to create resources and did not need to master a large amount of information and then reconcile it with the Training Package.

In both approaches, expert feedback was sought at different points throughout the elaboration process to fill gaps in the designer's knowledge and/or confirm a reading of a unit of competency

or assessment requirement. In some cases subject matter experts would directly elaborate learning resources. An education manager highlighted the importance of this input:

> "When we develop a brand-new subject, we have it peer-reviewed so we go and find a content expert in that space and they will go through our learning resources and leave red pen all over it as things for us to think about. We'll go yeah – that's not covered enough so let's bring them in. We find a lot of the time that the stuff they ask us to think about including, isn't actually required by the unit. But as someone in the industry working in that field, it is now important so we make sure it is included." (Education Manager, Site 2)

A striking finding is that most providers interviewed identified their educators as the main source of subject matter expertise during elaboration processes. It was only when they were not available that external SMEs were brought in. The educators interviewed had a deep and nuanced understanding of their industry and played a critical role in elaborating learning content and in contextualising and updating resources developed centrally. They also sourced supplementary resources to augment teaching and learning, which we discuss in the following section. Importantly, they had strong industry connections and were able to use these connections to continually update and refine teaching and learning practices and resources. A senior manager described the expertise in her team and their immediate network:

> "We have quite a diverse group of vets and veterinary nurses and other animal scientists and such working for us. We're quite aware of who has special interests or additional qualifications in what. So we'll often consult those staff that will eventually be teaching it and those staff that have that additional knowledge or experience. We'll always get their input as well… [And] … pharmaceutical reps or petfood reps, things like that. We have close contacts with specialist vets. So, for example, imaging specialist, to review some of our imaging content. Then veterinary nurses that work in specific fields, for example in exotics…or emergency or anaesthesia and so on and so forth." (Senior Education Leader, Site 3)

We found quality assurance processes and checkpoints dotted throughout all four translation processes until final approval for a pilot course or learning resource was granted. These are another source of information and a field of translation in itself. Review and evaluation were usually led by quality experts and finally checked by CEOs, senior managers, academic boards or curriculum and quality committees and continue well after a course and/or learning resource has been developed. Any required changes, especially significant ones, were made only after delivery has finished.

The products of elaboration comprise many different categories of conventional hard copy and online learner resources. Across the providers interviewed, the following products were described:

- Compulsory TAS and accompanying mapping and quality documents
- Unit and session plans
- Physical or online learner guides (text with still and moving images)
- You Tube and locally made videos
- Teaching guides
- Simulated and virtual learning environments

- Student journals
- Other knowledge artefacts such as handouts and PowerPoints
- Recordings of live classrooms and presentations.

According to participants, learning resources produced through the elaboration process are considered to be 'good' when they are:

- Produced in multiple formats. Many of the RTOs interviewed delivered the same qualification to multiple student cohorts, in multiple forms and at multiple sites and needed to ensure that learning resources were available in as many formats as possible. Print-based resources were essential in remote areas with poor internet connection, for learners in correctional facilities and others without internet access.
- Well designed with current and accurate content that scaffolds and builds on learning and include real examples (stories and case studies), meaningful activities that relate to industry and problem and scenario-based learning.
- Written in 'plain English' in an active voice to make them instructive and engaging. Importantly, the amount and type of content and academic level is appropriate for students and proportional to the level of a unit. 'No jargon' and if jargon is used, a glossary may be provided and not written in an academic style for Cert II and Cert III students. To accommodate these students, most providers utilised photos, graphics and other visual elements to convey information. One used the Australian Core Skills Framework (ACSF) to carefully tune the language in the text of resources to an appropriate level for these learners.
- Designed to enhance rather than replace teaching. One curriculum developer felt strongly that learning resources should not contain 'every single word' an educator needs to convey. Instead, they should contain most of the key information and leave room for educators to use their experience and supplementary resources they locate (Learning Designer, Site 10). According to another, 'although you can put all that information into your written textbooks or written learner guides, it doesn't always come across as tips and tricks for actually how you're going to implement this in reality, especially working with animals, I guess' (Educator, Site 2).
- Underpinned by principles of lifelong learning and encourage further learning with links to recommended further reading and other resources.
- Designed for Sharable Content Object Reference Model (SCORM) functionality for online and digital resources to enable educators to adapt content locally.

Although the research was focused on learning resources, our interviews regularly touched on assessment resource development as well. For instance, a leader whole role focused on compliance explained that:

> "We sort of will look at what the assessments need to be and then ensuring that when we get to the learning materials, we're giving them everything to be successful and what we've decided is what's necessary to be assessed on knowledge-wise and practical-wise." (Senior Education Leader, Site 4)

This manager suggested the same amount of thought and effort went into the two kinds of resource:

> "I don't know if one's easier than the other, really. So because they both need the same time, effort and thought to ensure that it's being interpreted to, you know, what's going to suit what the industry's current trends are. and best practises are. So, yeah, I think it takes about as equal a thought."

At this site, review and evaluation systems and templates for assessment and learning resources were identical.

At other providers, learning and assessment resources were developed in parallel. At some, the processes were more distinct but were aligned through mapping and validation exercises. We suggest that similar translation processes are followed for creating assessment resources, although the Elaboration process is likely to be more focused on Training Package information with less material outside the Package incorporated.

Organising

The final translation process is the organisation of learning sites.

For the three qualifications under study, supporting learning goes well beyond the learning resources produced by elaboration to include veterinary clinics, medical instruments devices and machines, pharmaceuticals, welding equipment, tractors, livestock, sheds, stables and training yards, grazing and cropping paddocks, stockyards, livestock sales, field days, silos, agricultural shows and external farms hosting work placement and tours and other rural work contexts.

These resources need to be organised within the normal operating requirements of workplaces such as clinics and farms, are often expensive to establish, procure and maintain and, are vital to the authenticity of learning for all three qualifications.

Organising relies on close reading and interpretation of Training Package content to find references to the workplace resources listed in units of competency, assessment requirements documents and companion volumes.

Participants emphasised the importance of offering students the options for accessing authentic learning, with some offering a mix of industry placement and on-campus real and simulated experiences. Sometimes the equipment and technologies specified in the Training Package were not available and had to be procured through other arrangements, either by sourcing the equipment or liaising with other workplaces to provide access for students. We also heard examples of providers hiring major equipment such as a skid steer for student practice. However, this came at considerable cost.

One provider was able to secure a government grant to purchase high-tech tractors and accessory equipment such as a spreader, sprayer and electromagnetic reader to teach the latest technological methods of soil and pasture management. Another prioritised investment in physical resources like tools and machinery, even transporting resources like skid steers over long distances to give students multiple opportunities to use them. A smaller provider serving disadvantaged learners created an engaging learning environment in a large shed to teach welding, metal fabrication, fencing and drone operations.

The organising process is translating the learning environments (contexts, equipment, tool, machinery and livestock) cited in Training Packages into reality. It is clearly influenced by pre-translation influences, as well as translation modes of framing, structuring, and elaborating where certain opportunities to demonstrate and practice are presupposed.

Mobilisation

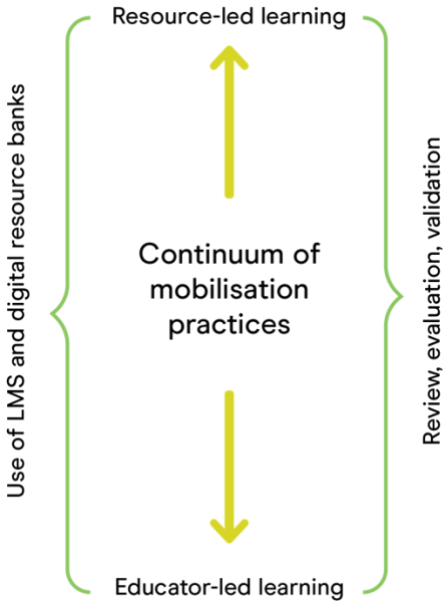
The final phase of translation involves using the learning resources and workplace environments and equipment to support learning. This process involves a range of decisions about how to deploy them resources.

Across the providers, there were differences in the extent to which the learning resources supported learning. In two of the four Cert IV providers, the courses were self-paced and fully online. In these examples, the resources can be viewed as the main support of learning. In contrast with such resource-led learning, there were providers whose students were more dependent on educators.

Educator-led mobilisation practices were often adopted where students experienced difficulties accessing and using the resources independently. These difficulties could stem from LLN difficulties through to lack of access to digital technologies and the skills to use them.

The practices in most providers were on a continuum between these extremes, with reliance on resources and educators alternating depending on course requirements. Figure 3 below represents the range of mobilisation practices we observed:

Figure 3: Mobilisation practices



While a continuum of practices could be described, all the providers used a system for distributing resources, mostly using an LMS (or other digital repository). Two main LMSs were described by participants. Most public providers used Moodle. Many of the private providers used the 'aXcelerate' platform produced by an Australian VET specialist software company. Canvas was used by one of the providers.

The way learning resources are mobilised differs for each qualification and to some extent, each provider. Students of the Cert IV generally use the LMS in a systematic way to manage their learning.

In contrast, Cert II students often lacked the skills, confidence or the technology to use the LMS and many of them struggled to download and read text-based resources without help. Cert II

providers tend to use hard-copy written learning resources downloaded from an LMS but mainly rely on educators to translate resources into effective learning experiences.

The use of written resources is generally kept to a minimum for these students who often discarded handouts at the end of a training session at one provider. There were good reasons for educator-led approaches in these cases:

> "I also don't think resources meet all the ways that people learn. It's written but when I teach, I have students who struggle with reading, so we do practical, we do videos, we do quizzes, we do scenarios to meet all their different learning styles. I feel the digital is going towards written, but those students are not literate. They have learning issues. That's why they're drawn to the industry – they're outdoor, practical people. If we keep heading towards digital, we need to consider the learning styles of these students and be mindful of who they are and where they're at." (Educator, Site 10)

Teachers engaged these learners with stories based on their own experiences as they coached them to learn and perform physical tasks.

Cert III providers prepare and offer a more comprehensive range of hard-copy and online learning resources for their students and use them to guide learning, including online. Some of the Cert III student cohorts face LLN challenges and rely on educators as the principal source of learning.

The four provider sites used locally produced and/or purchased print and online learning resources with one offering a suite of well-designed print booklets for purchase by other providers. Educators described using many industry and peak body resources with their students (e.g. MLA's Pasture Ruler) and simulations, games, guest speakers and other interactive class activities to make the classroom experience as engaging as possible. Access to farm experiences and current farm equipment was even more critical to learning than learning resources.

Two providers deliver the Certificate III on their own teaching farms. An educator described how carefully planned practical farm activities are their key resource with classroom learning slotted in around planned farm work. In these environments, it's common for the unexpected to occur and become part of the learning experience.

> "It's one of the few classrooms in the world where the vet [veterinarian] turns up and the class stops and we go out to see what's going on." (Senior Education Leader, Site 5)

The other providers have more limited access to farms. One uses physical and online simulation equipment and games to support students' training in welding, tractor driving and other skills and is developing virtual reality (VR) and augmented reality (AR) to create future learning experiences that will not be limited by geography or seasons.

The fourth provider uses its regional community as the primary learning resource and most of its educators and students come from local farming backgrounds. Although it has a range of simulation equipment and some outdoor spaces for farm vehicle training its students mainly learn on work placement or as trainees on local farms, where educators plan learning activities together with farm supervisors and employers.

In this case, multi-generational relationships and the shared knowledge of educators, students, employers and families are the principal learning resources.

While important, the role of educators is not as prominent in some of the Cert IV providers. In one provider, students only interact with them if they encounter learning difficulties or during assessment and live webinars.

Another utilises rolling webinars and online group study sessions with support from educators and well-being counsellors. A small amount of training is also provided in workplaces by mentors and supervisors who sign off on four key skills via third-party reports.

The use of learning resources is therefore different for each course and ranges in a continuum from a heavy reliance in the online, resource-led delivery of the Cert IV to not much at all during the educator-led delivery of the Cert II (see Figure 3).

The research confirms the critical role of educators in the pre-translation and translation processes. The educators we interviewed had deep histories in veterinary, agricultural and other rural industry practices and framed practical skills development in a wealth of narratives.

In regional communities, educators often possessed multi-generational roots in local agricultural and rural industries and education, seamlessly linking their work with family and community life. Teachers brought specific interests and passions about their industry to their teaching. For example, one had a long history in holistic and regenerative farming and had influenced his colleagues to introduce a focus on sustainable agriculture into the Cert III, aligning this qualification with the institution's sustainability strategy.

The most valuable resources they bring are the stories of their experiences in industry and the way they relate them to Training Packages and translate them into learning. One senior manager described such educators as 'the whole package' (Education Manager, Site 12), because they hold the attention of students while teaching required skills, knowledge and techniques without using learning resources.

This finding highlights the value of providing opportunities for educators to pursue their interests and passions in their industry (rather than checking off industry currency as required by the Standards for RTOs 2015) and developing their capacity and interest in developing curriculum.

As in other parts of the pre-translation and translation processes, review, evaluation and validation processes were evident across the continuum of mobilisation practices. Providers described a range of mechanisms. Some used highly formalised systems for recording and processing problems, suggestions, updates and concerns. Others used a simple online document that designers would check from time to time and then communicate changes to educators. Educators were often the source of information. In some cases, students were an avenue for feedback. Some providers employed informal systems.

One small provider explained that problems would always find their way back to the designers so there was no need for a formal feedback system. Regardless of the level of formality, all the providers were sensitive to problems with their resources and addressed issues as soon as practicable. Changes following review, evaluation and validation cycles tended to be implemented once a given unit or course was complete.

Challenges

A number of challenges to translation were described by participants. Many concerned Training Packages and Package development processes. These challenges varied across the three

qualifications. Almost all providers criticised the time taken to develop new or updated Training Packages and the resulting amount of outdated content that needed to be translated.

Some mentioned the limited time allowed for providers to transition to a new qualification within the allotted teach-out times as a significant challenge and called for extended teach-out times and/or greater notice of extensions when they are granted.

Others suggested that it would be helpful if they could receive earlier notification of the changes being considered, in particular how many units will be altered to allow them to allocate resources for the translation work. They pointed out that it is much less work to accommodate the insertion or deletion of whole units of competency than to respond to changes to parts of units.

The curriculum team at one larger provider explained that they try to keep abreast of what each JSC is working on, and often ask for access to draft material ahead of release of a qualification, to make sure their teaching areas know when changes are coming. In that way, 'it's not just sort of landing on a teaching department to accidentally happen to notice' (Educational Manager, Site 8).

The time and cost of translation, particularly when changes to Training Packages are significant or require unusually rigorous and prescriptive translation processes, can be onerous, especially for small providers. Several providers expressed interest in being able to seek advice from the JSC on the interpretation of Training Package content.

Within Training Packages themselves, the most commonly identified barriers related to the specificity of units, especially the Performance Criteria for the Cert III. In addition, a provider mentioned that some employers want particular Certificate II level units, especially around the safe use of equipment and machinery, to be included in the Cert III.

The majority of providers (eight of the twelve sites) considered some units to be overly prescriptive and not reflecting current industry practices in their region, often referring to requirements for expensive, rarely used equipment, or to techniques not used locally. This is compounded by overly prescriptive audit interpretations of assessment requirements. In a useful example, a Cert IV provider raised the difficulty of veterinary nursing students getting the specified practice on ultrasound machines which are rare in veterinary clinics; they suggested a solution:

> "With the ultrasound thing, for example, rather than including ultrasound it could be imaging such as ultrasound, endoscopy…It's using more generic terminology where it's not essential to life and death and where we're moving from knowledge and theory-based and some practice, through to proficiency when you're on the job." (Senior Education Leader, Site 3).

Conversely, some Cert IV providers felt that units in this qualification do not provide enough guidance in units, leaving them too open to interpretation, and regretted the removal of 'range statements' from Training Package documentation:

> "They were really helpful in deciphering what the package is actually asking us to train and assess. So that would be, I think, useful to bring back in. I'm not sure why it was stopped but they definitely helped." (Education Manager, Site 3).

Most Cert III and Cert IV providers used physical and/or virtual simulations for learning and assessment. Simulations are used for many reasons including animal welfare considerations, and for providing students with experiences or conditions not available where they live, learn and work.

Some providers demonstrated impressive simulation work, but a few participants expressed concern that such simulations were not acceptable for assessment of skills. It was not clear to the research team whether these reported rejections were due to Training Package stipulations, individual auditor opinion or even provider governance decisions.

Most providers felt that there is not enough educator input into Training Package development and review, which has led to the requirements in some units being difficult to translate into coherent learning experiences. They suggested that greater input from educators and educational designers would avoid impracticable learning and assessment requirements, including the often reported need for excessive information. They also mentioned that content in Training Packages does not always adequately reflect the variety of work practices across jurisdictions, given that some tasks are not allowed in the workplace in all states and territories.

Other challenges impacting on providers' capacity to meet local industry needs include boundaries between content areas that do not align with training needs in particular locations. For example, horticulture and agriculture for the Cert III, compliance requirements and VET system rules that limit clustering and grouping of units in ways that better reflect work in certain workplaces, units of competence that assume a certain business size and/or mode of operation and do not reflect the realities of working in smaller businesses that may not have formalized processes.

One participant explained that it was not always obvious where Knowledge Evidence related to the Elements and Performance Criteria as the same knowledge could relate to different Elements and Criteria.

Therefore, a decision would need to be made about the most logical way to introduce a given topic to make it meaningful for learners. Another provider called for the release of the mapping they assumed would have taken place during the development of Assessment Requirements for each unit so that there could be no doubt about the relationship between the Knowledge Evidence and the Elements and Performance criteria.

This resource designer resorted to Generative AI to show this relationship. Finally, comments were made about the influence of individual 'loud voices' from industry in the development of units, leading to an overemphasis on certain skills, knowledge and technologies. A reference was also made to a lack of understanding among employers about who develops units of competency and sets the parameters for learning.

> "I did some work in learning design with [a client] and they were very cross with it at the time. I had to explain that it wasn't [our provider's] fault. [Our provider] doesn't actually make the unit. This is a process and not something you can change in 5 minutes." (Education Manager, Site 10)

The challenges to translation for participating providers varied according to the purposes and characteristics of the qualifications they were delivering. The main barriers to translation were increasing workloads leading to overloaded and time-poor staff, a loss of curriculum and learning resource development capability in VET generally and a shortage of educators.

Despite these challenges, most of the staff we interviewed found value in the Training Package system. In particular, the Packages allow providers to gauge market expectations. Apart from the fact that their courses *must* use national training products as a basis for translation if they are to compete in the training market, the detail of products like Training Packages give staff with design roles guidance on what to include and not include and thus providers can be reasonably confident

their courses will be competitive in terms of volume and type of learning. Training Packages provide a yardstick to help put a boundary around the potentially open-ended processes of translation.

Summary of findings and analysis

The research reveals the great complexity of processes involved when a VET provider decides to create or modify a course and design and develop resources.

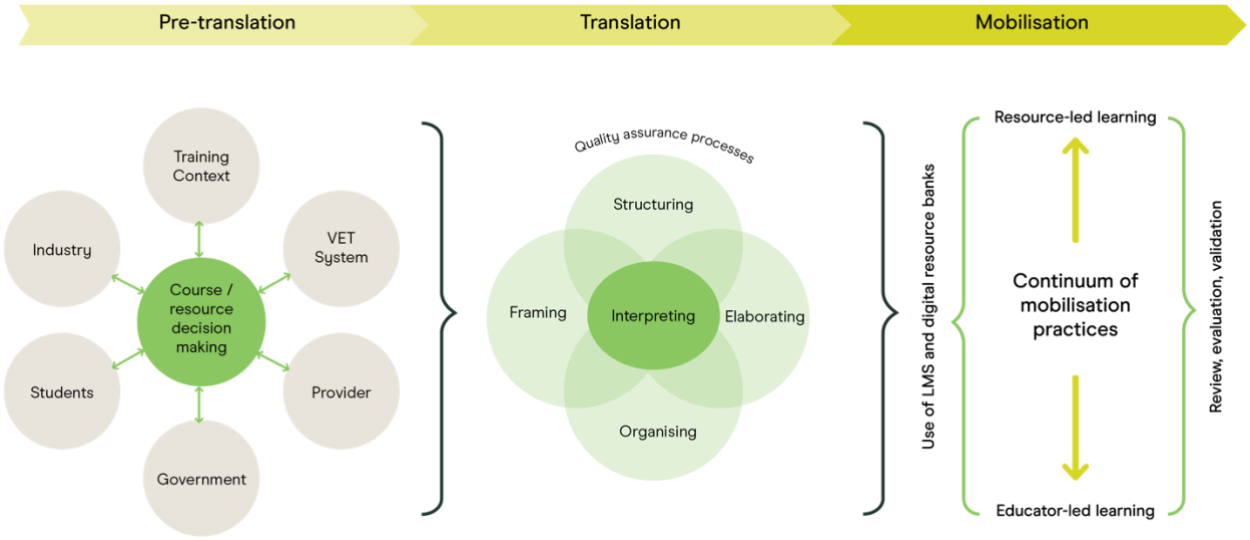
What we have termed 'pre-translation' involves identifying, reflecting on and analysing six distinct influences. Each must be considered, and they interact with and inform each other. No two providers balance these influences in the same way.

Significant expertise is required to appraise and respond in a way that leads to success for a provider and its staff, students, employers and industry. Pre-translation decisions trigger the four overlapping processes of translation.

Interpreting Training Package content is the key activity, but different aspects of Training Packages come to the fore in each mode. Study of Packaging Rules is critical during the Framing of a course, holistic reading of units is important for Structuring, while very close study of units and assessment requirements underpins Elaborating and Organising.

The products of translation are mobilised via different repositories, and support learning in a direct way (e.g. in online learning) or are on-hand for educators. Our study showed that in some cases, students are highly reliant on educators and the latter may make minimal use of supplied resources. The three translation processes of learning resource design and use are shown in Figure 4.

Figure 4. Model of processes of learning resource design and use



Across the three case study qualifications, there were some differences in the way the processes represented in the model play out.

In the pre-translation phase, the Cert II providers were especially attuned to student profiles, needs and aspirations. Cert III providers shared an emphasis on students but balanced that with

Industry and Training context. The Cert IV providers were very focused on industry knowledge and skills, and closely interrogated the relevant Training Package (VET system influence).

Through the translation processes, which all involve different approaches to interpretation, framing and structuring were more demanding tasks for the Cert II and Cert III providers who had a large number of electives to choose among. Because outdoor environments were important, too, structuring decisions to do with sequencing could be particularly challenging for these qualifications.

In contrast, structuring decisions were more demanding in Cert IV providers who used clusters or linked sets of units to articulate with the veterinary nursing body of knowledge and skill as well as clinical practices.

Elaborating and organising were equally important across the qualifications, although the Cert IV providers ensured that students were placed or working within appropriately equipped environments, while the Cert II and III providers had more direct responsibility for organising the learning site. In terms of mobilisation practices, resource-led learning was more prominent in the Cert IV provision, and educator-led learning most prevalent in the Cert II and III providers.

Table 3 below identifies points of comparison across the qualifications arranged in terms of the model components.

Table 3. Comparison of emphases on model components across case study qualifications

Model component	Cert II emphasis	Cert III emphasis	Cert IV emphasis
Pre-translation			
Industry	Industry an opportunity for student development	Serving industry	Clinical relevance
Students	Student needs and aspirations	Student capability development	
Government			
VET System			Interrogating the Training Package
Training context			
Provider			
Translation			
Framing	Elective choice	Elective choice	

Structuring	Unit sequencing	Unit sequencing	Unit grouping
Elaborating			Detailed, rigorous
Organising			
Mobilisation			
Resource-led			Online delivery
Educator-led	Student dependence	Credibility of educators	

Challenges were found at each of the translation stages. Training Packages bring with them a range of problems that can make the work of providers difficult. The providers we researched were all committed to serving students, the community and industry, yet had to contend with complex, costly and time-consuming demands to remain in the VET system.

A note on the survey

Although there were relatively limited responses (n=23), the survey findings broadly confirmed what the interviews with the 12 providers revealed. The bulk of respondents answered the questions in relation to the Cert III qualification, and senior leaders were the largest group of respondents. The survey results indicate that:

- Providers tend to create their own resources. However, some also use a mixture of in-house and externally developed resources.
- There is predominantly a team-based approach to the translation process involving both specialist staff and educators.
- Educators' knowledge is critical but also that the knowledge of others is important.
- Industry has an important role to play in the translation process, including through resource pre-validation and validation processes.
- Written learning guides were the most common product of provider translation, with industry-developed resources making up a substantial amount of the resources used to support learning.
- An important feature of quality resources is their currency and accuracy of content.
- Educators are the main support for learning.

Concerns about the quality of training packages include the currency and accuracy of their content, repetition, staff skills in unpacking and interpreting their content, and the frequency of changes. Other issues include the time and expense of resource development and regulatory requirements. An overview of the survey results is presented in Attachment 2.

Discussion and implications

This study of training product translation in Australian vocational education and training (VET) portrays complex processes taking place in a very complex environment.

Stepping back from the findings and analysis discussed in the previous chapter, this section reflects on implications. We consider the question of purposes first.

The research was designed in part to allow some exploration of the three purposes proposed by the VET Qualification Design Reform Group (QDRG, 2024). Although aspects of their proposed purposes were confirmed by the practices of participating providers, other emphases were evident that prompt suggestions for further work by the QDRG.

The second part of this chapter looks at translation. The lens of translation brought into focus a range of activities and processes in providers that require great skill, carry risk, are time-consuming and expensive. We consider the imposition on providers when Training Packages change (as they must) and the types of skills required to do translation work.

The third part of the discussion relates to curriculum. While translation was a useful metaphor in this study, curriculum is the proper field for the research and outside Australian VET gives us a rich and generative language for understanding the creative work of providers as they negotiate the requirements of multiple stakeholders. We make a case for reviving the language of curriculum in Australia's VET system as a step on the way to acknowledging and supporting the expert contribution of providers and educators to the system.

Following on from this argument we revisit the topic of competence. The research indicates that when providers respond in educationally robust ways to the needs of students, communities and employers, they enact a more nuanced concept of competency than is currently endorsed by the system.

Drawing in part on international examples and Australian VET research, we suggest that a more sophisticated concept of competency would present an opportunity for VET to more systematically address the multiple purposes the sector serves.

Purposes

The research shows that even across just three qualifications, a range of purposes are in play, each guiding the way training products such as Training Packages are approached for translation.

While there was some variation among providers, distinct similarities applied to each qualification. An important variation is that between using the Training Package as a translation reference point to support learning for a defined occupation and approaching a Training Package as an opportunity to serve a social, community and learner need. We discuss course purposes evident across the providers in this study and relate those purposes to the current debate about qualification purposes below.

Our site visits provided evidence of the case for qualifications change as discussed in the QRDG's March 2024 report. Each provided evidence of 'the overspecification that contributes to compliance overload in VET delivery and assessment' (QRDG, 2024, p. 3). Each site also

demonstrated how VET educators and other provider staff work around these and other obstacles to give students outstanding learning experiences.

While previous VET research has explored these phenomena, this study is unique in addressing the QRDG's proposed differentiated qualifications system in its research design and analysis. The primary goal of the research was to explore how providers translate Training Package requirements into effective learning support.

In terms of its design, the project identified three qualifications as a basis for recruitment of providers. The decision was taken to align the selection of qualifications to the three purposes differentiated by the QRDG. These three qualifications and the purposes to which they were aligned are:

- Certificate IV in Veterinary Nursing: aligned to Purpose 1
- Certificate III in Agriculture: aligned to Purpose 2
- Certificate II in Rural Operations: aligned to Purpose 3.

Four providers were recruited for each qualification. Although the research focused on translation of training products, the opportunity was taken to observe differences in purpose and other practices by providers that relate to the level, content and structure of the qualifications and the student cohorts served.

Consequently, our findings provide insights into how the application of the proposed Three Purposes model might work in practice, especially the nuances of purpose that will need to be addressed. The findings also provide a context for examining the *Qualification Development Quality Principles* proposed by the QRDG and related issues. The insights below are organised according to the three purposes.

Purpose 1

- qualifications leading to a specific occupation (QRDG, 2024, p. 3)
- maintains a level of specificity necessary for safety or licencing requirements, particularly the integrity of the trades, and is unlikely to change substantially from the current approach (QRDG, 2024, p. 5)

The findings show that the Certificate IV in Veterinary Nursing does and does not align directly with Purpose 1. On the one hand, its description in the ACM Animal Care and Management Training Package closely supports the Purpose, stating that:

> "This qualification reflects the role of a veterinary nurse who works under the supervision of a registered veterinarian to provide nursing care to animals, to support veterinarians to carry out medical and surgical procedures, and to support clients to maintain health of animals." (https://training.gov.au/training/details/ACM40418/qualdetails)

Given that 17 of the 24 units needed to obtain the qualification are core (mandatory), the qualification design is certainly specific. However, the providers we interviewed did not limit learning to the task-based focus of the relevant units of competency, identified as a risk by the QRDG. Rather, they described using the units as vehicles for teaching what they regard as the more important, internationally recognised body of theoretical and practical veterinary nursing

knowledge to be found in textbooks and journals. Their prioritisation of knowledge as well as skill and application aligns with the proposed *Qualification Development Quality Principle* to 'place equal importance on skill, knowledge and application' (QRDG, 2024 p. 5).

Providers also described a commitment to developing graduates with distinctive capabilities such as those needed to thrive in a stressful occupation with high attrition rates as has long been the case for veterinary nurses. These circumstances provide evidence for the importance of another of the proposed Quality Principles:

> Ensure learners' needs and aspirations inform qualification design, including occupations, transferability, transitioning occupations and industries, and mobility across industries. (QRDG, 2024 p. 5)

Overall, the findings indicate that the task-focused competency model is not sufficient for this occupation. Apart from a stronger focus on veterinary nursing knowledge, student veterinary nurses are likely to benefit from a qualification design that explicitly develops general capabilities, transferability and aptitudes to support them in veterinary work and other future roles.

The Certificate IV in Veterinary Nursing case study in this research therefore does not fully support the part of the Purpose 1 statement that qualifications like these are 'unlikely to change substantially from the current approach'.

Rather, while the current competency-based approach does serve to help providers orient to the market (e.g. by knowing in advance the approximate volume of learning that competitors will need to allow), it is not the substantive reference point for the knowledge required by contemporary veterinary nurses.

Purpose 2

- qualifications to prepare learners for multiple occupations within an industry (QRDG, 2024, p. 3).
- focuses on the development of qualifications that prepare learners for multiple, related occupations while retaining industry relevance (QRDG, 2024, p. 5)

Our findings for the Certificate III in Agriculture case study show some alignment between the Purpose 2 model described by the QRDG and the courses delivered by the four participating providers.

They also illustrate the complex and nuanced design approaches these providers use to meet the needs of their local students, communities and employers. Their experience with supporting learning for transferability and learning pathways provides useful lessons for qualifications reform.

All four providers described their commitment to preparing learners for multiple agricultural occupations. The research indicated that course design reflected careful thinking about what graduates would need in order to play a valuable role in agricultural settings.

This role is unique in a sense, since multiple forms of knowledge and skills need to be integrated for the graduate to serve their industry and community. That role exceeded what was described in the Training Package.

One provider went so far as to develop non-Training Package curriculum to supplement material directly based on units of competency to create graduates capable of playing a proactive role in local communities as well as possessing the adaptability to move between different skilled agricultural roles. This focus on a 'well rounded', flexible and capable graduate was strongly evident across the four providers.

It was noteworthy that, despite substantial elective choice offered by the Training Package, providers themselves designed their courses with little or no choice of electives for students.

Each site selected 16 units which they consider provide learners with the agricultural foundations needed to follow many farming-related employment and further learning pathways. The QRDG suggests that 'lengthy lists of electives' will be problematic in the redesign of Purpose 2 qualifications, however the participants' experience indicates that a very wide range of elective options is not required to deliver the Certificate III.

Moreover, while some might argue that a wide range of electives enhances flexibility and student choice, the critical factor is what options providers themselves decide to include. These options are dictated by a range of factors, including local needs, resource requirements, time needed for effective delivery, and staff expertise.

Delivery context is a major influence on course design. Each of these regional or peri-urban providers is deeply embedded in its local farming community and uses the Cert III qualification as a framework for delivering courses strongly reflecting the expectations and agricultural education traditions in that community. All four providers stressed that they teach for transferability, for example by ensuring that students get experience with a range of crops, equipment, machinery and animals.

The providers' experiences justify the QRDG's expectation that purpose-driven models may need 'to redefine outcomes-based assessment' for Purpose 2 qualifications. They all gave examples of competency standards and performance criteria that were impractical, outdated or overloaded with requirements.

For example, one provider takes performance criteria from a range of units to cover the extensive safety requirements on different farms and concentrates them in a bespoke module. A qualification design that focuses on broader outcomes could solve these limitations by providing a framework for developing locally relevant skills and knowledge. Participant statements indicated that such an approach would require retraining of auditors and even for educational support staff who are not used to interpreting broader statements – and local interpretation – of assessment requirements.

Pathways are important for these providers when creating their Certificate III courses. All four providers expect many of their students to complete more than one qualification across an integrated agricultural suite. To varying extents the providers reported removing duplication across qualifications conceptualised as a suite by clustering units for more coherent delivery and separating theory and practical activities to accommodate integrated farm-based learning opportunities for students at different levels.

The proposed purpose-driven qualification design model could simplify this effort and better support the agricultural qualification pathways. The providers' experiences of many VET agriculture graduates pathwaying into higher education at their own campuses or through other

higher education providers (HEPs), raises the issue of improving transition and credit recognition, also identified in the QRDG paper (Qualification Reform Design Group, 2024, p. 10).

It may be time to reconsider the architecture of qualifications suites like agriculture to facilitate transition and credit recognition in HE. Explicit specification of knowledge outcomes and a more consistent, perhaps credit point based, unit design model would make it easier to give credit into each step of the suite and for HEPs to recognise VET learning.

Purpose 3

- qualifications that develop cross-sectoral or foundation skills and knowledge which may be applied across industries, or lead to tertiary education and training pathways (QRDG, 2024, p. 3)
- provides additional opportunities for innovation in areas such as cross-sectoral skills, foundation skills and tertiary pathways (QRDG, 2024, p. 5).

Evidence from the Certificate II in Rural Operations providers interviewed for this project suggests that the QRDG may need to expand their concept of Purpose 3 qualifications, recognising that some learners need personal development before they can engage in the learning that 'may be applied across industries, or lead to tertiary education and training pathways' (QRDG, 2024, p. 12).

The current Purpose 3 definition fails to capture the significance of the Certificate II in Rural Operations for personal development, especially for disadvantaged and disengaged students.

For the participating providers, learning at this level is as much about building individual self-worth, dignity and self-efficacy as it is about providing learners with skills that are of value to their employers and/or communities. One of the four providers operating in remote communities took a whole-of-community approach to qualification design and delivery. They leveraged the inherent flexibility of the Certificate II in Rural Operations qualification to build capability to achieve community sustainability.

The providers of the Certificate II in Rural Operations each embed language, literacy and numeracy (LLN) learning and other life skills alongside their technical skills development program. They nurture resilience and other capabilities besides technical skills to help learners progress on their journeys to productive lives and work and contributing to thriving communities.

A student-centred philosophy was evident across the four providers which is not currently reflected in Purpose 3. Our research indicates that Purpose 3 could be modified to incorporate individual capability development and engagement through technical and foundation skills, knowledge and aptitude learning.

For all three qualifications studied in this research, participating providers' deep experiences of meeting the learning needs of their students, communities and workplaces exemplify the importance of developing broad capability and transferable knowledge and skills.

In each case, providers recognised that their learners could move across and out of the industries for which they initially train. They know that learning to learn and preparing for further learning are important skills for life and work and are, in varying ways, seeking to develop the capabilities each learner cohort needs to thrive. Less task-based and dense specification within training

products would enable these providers to focus on local and transferable knowledges, skills and aptitudes that are relevant to their learners, communities and industries.

This applies as much to the Purpose 1 qualification studied as to the other two, although the orientation of the Certificate IV in Veterinary Nursing was toward a body of knowledge that goes beyond the Training Package, while the orientation of the other qualifications is toward both a broad industry outcome and personal capability development.

We recommend that the purpose statements proposed by the QRDG be revisited to consider how personal capability can be incorporated. In the light of this research, the Purpose 3 statement in particular warrants expansion to include this emphasis, although personal capability was also relevant in the qualifications aligned to Purposes 1 and 2 (see Recommendation 11).

Translation and VET

Translation offers a lens for understanding processes preceding, surrounding and following creation of learning resources. Two basic models of translation were introduced in our review of literature. The 'linguistic' model focuses on how meanings are preserved when they are converted from one way of making sense to another. Jacobson's modes of translation (in Hodge, 2024a) apply to the VET context, from intralingual (e.g. when the content of units of competency are explained in a different way) through to intersemiotic (e.g. when a game is invented to teach about communication and teamwork).

In contrast, the 'sociology of translation' model (Freeman, 2009) focuses on the way contexts change meanings. According to this model, meanings are fundamentally reshaped when they are taken up in a new setting. The justification of this approach is that organisational cultures and practical realities are complex and dynamic, and that the interaction of people and things in the moment destabilises original meanings.

Our research suggests that training product translation falls between these two models. A number of VET system mechanisms are intended to preserve meanings (i.e., content of packages) as they move through the system.

Consulting with industry to derive the content is supposed to guarantee that what is represented in units of competency is going to be recognisable in workplaces entered by graduates. Compliance mechanisms are designed to ensure providers are vigilant about the fidelity of content from Training Packages to TASs to the design of learning resources.

The emphasis on assessment in VET aims to create a loop between Training Package content and knowledge and skill outcomes. The language of the sector itself – 'delivery', training 'packages', and 'unpacking' units of competency – promotes a mindset of preservation consistent with the linguistic model of translation.

However, the sociology of translation model is at least partly descriptive of the practical reality of translation in the providers in this research. Translation was shaped by context.

The six influences we identified as significant in the pre-translation stage (course decision-making) continue to be influential through translation and into mobilisation stages.

The training context and factors relating to industry, the provider and their student cohorts each impact the translation of unit content. Further, each provider had their unique ways of operating and histories of provision that influenced how content (meanings) were interpreted. Students at different providers thus have different learning experiences.

They might be studying the 'same' topic (signified by a heading in a resource that matches the wording of an element or performance criterion from a unit of competency) but exactly what they learn, how much and at what depth varies from provider to provider.

The translation process of elaboration in our model accounts for some of this variation because the research process within elaboration pulls in a large amount of material to develop learnable content. Mobilisation, particularly in the educator-led mode, is another way context impacts meaning. Educators adjust and modify content continuously to address student needs.

The fact that both models of translation (linguistic and sociological) describe learning resource design, production and use in VET helps to explain the tensions and complexities we observed. The people we interviewed were all aware that learning resources, teaching and assessment had to reference Training Package content, and knew that their fidelity could be questioned at any time.

At the same time, providers in our study were keenly aware of the diverse needs of real employers, local communities and individual students and cohorts. This sensitivity characterises good providers and sets up an ongoing struggle to demonstrate compliance and uniform interpretations of authoritative content.

This struggle is heightened when Training Packages change. From the perspective of translation, such a change is like an original language shifting. What has been translated in one way now has to be translated in a new way. Changes to Training Package content created significant disruption for providers who participated in this study, particularly those offering the Certificate IV in Veterinary Nursing.

We observed that the underlying reason for these changes was already noted by providers, who found ways to reflect industry changes (e.g. in technologies used in clinics) in their resources and teaching ahead of relevant changes to Training Packages. The cost of translation was a question foregrounded in the project.

The complex processes of pre-translation and translation are time-consuming and expensive. The VET system does not necessarily comprehend the complexity, time and costs involved in translation. In a marketised sector, the pressure to minimise these impositions could potentially affect quality of learning experiences. Providers in our project did not appear to compromise translation but did express keen awareness of the demands of the process.

Since government funding mechanisms do not acknowledge the costs of translation (or of acquiring third-party resources in lieu of translation), providers must absorb them and somehow manage additional impositions that come with Training Package change. There is scope to recognise the real costs of translation, and to acknowledge and respect the expertise brought to the process by providers.

We recommend that the costs, including professional development, associated with translation be researched and measured and that the implications of these costs be part of the formula for VET provider funding (see Recommendation 8).

The translation lens also raises questions about the guidance stemming from the Standards for RTOs, regulator information, and the TAE Training Package. All of the providers reflected the

information in the Standards for RTOs 2015 regarding possession of expertise, drawing on industry, and understanding and supporting students.

They all prepared TAS documents as required by regulators, in some cases embedding them in organisational processes to convey decisions from one part to another. However, pre-translation course decision-making is far more intricate than portrayed in the Standards and regulator documents. In terms of translation processes themselves, the providers in our study developed strategies for reading, interpreting and analysing Training Package information that go beyond the TAE Package in terms of complexity.

For instance, the close reading and reflection required to match Knowledge Evidence requirements to Elements and Performance Criteria is not hinted at in the Package, yet was a critical process to ensure the design of compliant learning resources.

It is noteworthy that instructional design principles are identified in the TAE among the knowledge requirements for units addressing resource design and development. Yet it would be difficult to implement orthodox instructional design in the context of Training Packages. Instructional design (Smith & Ragan, 2005) calls for the use of taxonomies to analyse job tasks to determine the types of learning implicit in them. This analysis precedes selection of learning activities and design of resources.

However, the information in Training Packages includes both a description of the task (in elements and performance criteria) and a basic taxonomic analysis (in the knowledge and performance evidence items). Because the rationale of this taxonomic analysis is never shared, provider staff have to try to 'reverse engineer' the analysis before they can create resources. This necessity creates difficulties for providers and would thwart the use of sophisticated instructional design methods since providers must prioritise the elementary taxonomic analysis into knowledge and performance evidence sought by auditors.

We therefore recommend that the TAE Training Package reflect the complex processes of translation to encompass the expertise needed to design and develop high quality learning materials and teaching. If higher AQF Levels are implicated, then these should be considered within a developmental suite. Our model may be a starting point for the analysis of translation (see Recommendation 9).

Curriculum and VET

The tension described above between translation as *preservation* and as *transformation of meaning in new contexts* has long been a theme in curriculum research and theory. Stepping back from the project's tight focus on how Training Packages guide learning resource creation, the body of knowledge arising from curriculum research presents a sophisticated way to comprehend the complexity of translation in VET.

The concept of curriculum prompts us to consider the work of VET providers to create resources, and of educators to support learning, as a discrete domain of expertise. Key concepts of the curriculum body of knowledge, including intended curriculum, enacted curriculum and hidden curriculum, draw attention to a core set of concerns that connect these different forms of curriculum. VET curriculum-making is an interconnected set of activities concerned with adding value to what is contained in expressions of 'intended curriculum' like units of competency.

As 'curriculum makers', providers *could* be empowered to view competencies (or other forms of standards) as compressed and partial representations that require robust interrogation to get at the full significance of the knowledge and skills they presuppose. If providers were empowered in this way, regulators and their auditors would need to be sensitised to the positive and productive role of curriculum in order to value the curriculum making of providers rather than seeking evidence of mere replication of terms and techniques in learning resources.

According to the curriculum body of knowledge, intended curriculum (like the statements of outcomes in units of competency) must be enacted. Curriculum enactment is understood to be an active, creative process. It is important to realise that enactment is not a purely subjective or unconstrained undertaking. In fact, it reaches 'behind' the intended curriculum to tap into the 'same' domain of skills, knowledge and application from which the statements of outcomes themselves derive. This is why 'local' interpretations of national Training Packages do not undermine the integrity of the system. Both competencies and the interpretations reflected in learning resources and teaching refer to the same subject matter (i.e. occupational knowledge and capabilities). In our project, providers and educators were clearly attuned to the complex realities of occupations, communities, employers and students.

These realities are also the ultimate reference point of intended curriculum, and by delving directly into these realities, providers and educators give life to the units of competency. Local interpretations underpin robust enactment of Training Packages by understanding and honouring the sources of the content of the packages.

The curriculum body of knowledge uses term 'hidden curriculum' to refer to learning that is not explicitly referenced in statements of intended curriculum. In this context, 'hidden' does not mean something negative or reprehensible. It can refer to desirable additional learnings.

In our project, the value-adding of providers who go behind units of competency to get at the roots of competency creates a curriculum that extends beyond the statements of the units. But in this case, curriculum is only 'hidden' if the system expects providers to strictly replicate Training Package content.

The hidden curriculum we observed in our project represented the kind of interrogation of intended curriculum that should be promoted by the VET system. If system stakeholders including regulators grasp the importance of this kind of curriculum making, then they will not be fixated on the reproduction of the sample of performances described in units of competency.

Rather, they will expect providers and educators to always go 'above and beyond' Training Packages in their resources and teaching. Providers do this by going behind the units of competency to draw from the living ecosystem of skills and knowledge that comprise everyday work.

A curriculum perspective on VET provider translation work would take us beyond the parameters of translation theory. Providers and their educators would not be limited to translating what is contained in Training Packages.

The vocational expertise of provider staff (demanded by the Standards for RTOs 2015) would guarantee that what is briefly described and listed in Training Package documents is unfolded in a way that is consistent with the much more extensive and coherently interrelated body of skills and knowledge that comprises the type of work in question.

A curriculum lens would assume that educators with appropriate expertise do creative work with intended curriculum. They would approach statements like units of competency as if they were the tip of an iceberg that their expertise allows them to detect and follow beneath the waterline.

The Cert IV providers elaborated curriculum based on units of competency by referring to a veterinary nursing body of knowledge and their up-to-the-minute awareness of innovations in veterinary practice founded on that body of knowledge.

In this case, the link between the 'hidden' and intended curriculum was reasonably clear. The Cert IV resource designers and educators could find most of the terms, concepts, theories, techniques and equipment referenced in the body of knowledge and clinical practice in the relevant Training Package.

In contrast, Cert II providers, especially those that foregrounded individual capability, had to go deeper behind the units. These providers considered the skills and knowledge described in the relevant Training Package as abilities that assume empowered, engaged individuals.

They elaborated this deeper level of capability in their curriculum, using the skills and knowledge specified in units of competency as a scaffold for developing individual confidence and agency.

In a sense, these providers were reaching behind the detail of units of competency to get at the nature of competency itself, what competency as such looks like. If this describes the direction of their interrogation of intended curriculum, then they are looking past the current definition of competency in Australian VET (which has a job role and task focus) toward a notion that incorporates individual capability as well as workplace skills and knowledge.

This project demonstrates that providers, designers and educators routinely go above and beyond the content of Training Packages to create learning resources and engaging teaching.

To do so, they go behind the intended curriculum (content of Training Packages) to tap into the nuanced realities of work and human capability. A curriculum approach would endorse this creativity instead of regarding it with suspicion. At present, regulators are constrained by CBT to look for practices and resources that strictly reflect what is written in units of competency.

This project uncovered the problem with this practice. For example, one high-quality provider clearly dedicated to its students, community and employers, and which possessed exceptional vocational and educational expertise, was anxious about the regulator failing to understand why their resources and teaching went above and beyond the Training Package. Conversely a curriculum approach would call for regulators to ask how providers, their resources and teaching, go beyond the units to create rich, effective learning.

We recommend that curriculum be reclaimed as a critical aspect of VET that describes the creative work of providers and their educators to go beyond what is written in Training Packages (or any skill standard) to give students rich, engaging learning experiences.

Curriculum is an interconnected set of activities that requires educational expertise to connect students to the job, industry and working life realities that are indicated in Training Packages (see Recommendation 12).

Competency and VET

Going beyond translation to curriculum making draws attention to important, expert, creative work of providers. It also raises the question of the adequacy of the conceptualisation of competency in Australian VET. The current definition of competency is:

> The consistent application of knowledge and skill to the standard of performance required in the workplace. It embodies the ability to transfer and apply skills and knowledge to new situations and environments. (Standards for RTOs 2015)

This definition is reflected in the way units of competency are constructed, emphasising performance of tasks and roles. Providers in this research went beyond what was briefly described in the units in the elaboration process that is necessary to create rich, informative learning resources. Educators using these resources or adjusting in the moment to support students also go beyond the clues provided by units of competency.

As explained above, 'going beyond' is not subjective or random. It is guided by an expert sense of what is only briefly referenced in the units. Depending on the qualification in question, we learned that this reference point beyond the unit documentation may be a coherent, effective body of knowledge and skills, or may be concerned with individual capability building. Provider curriculum making in this project demonstrate a broader sense of what it means to be competent.

This research therefore supports the QRDC's (2024) proposition that there may be a need to reconceptualise competence in Australia's VET system by demonstrating that there is a need for a broader, more holistic concept of competence. It is noteworthy that the current Australian VET sector definition of competency has not been substantively updated for around 30 years. In the meantime, the conceptualisation and operationalisation of competency has continued to evolve outside Australia and in other education sectors here.

The VET systems of the four countries (Scotland, Germany, Sweden and Singapore) we reviewed as background for this research each articulate comprehensive technical and generic, personal competencies and importantly, see the latter as stand-alone competences rather than embedded in technical competence. In contrast, the Australian VET definition of competency remains a relatively narrow, technically oriented concept that drives the development of Training Packages and related auditing activities.

The narrowness of the conceptualisation of competency reflected in Training Packages hampered the providers we interviewed as they attempted to produce the well-rounded, highly skilled, knowledgeable and adaptive graduates they envisage for their industries and communities. All provider sites articulated visions extending beyond the sampling of tasks and roles described in the Training Packages.

In this context, our review of selected international VET models provides two important messages. First the European Union, including Germany and Sweden, identifies eight key competencies for lifelong learning that could inform a broader and more future-focused definition of competency in Australia.

They are language, literacy and numeracy (LLN), science, technology and engineering, digital, personal, social, and learning to learn, citizenship, entrepreneurship and cultural awareness and expression (Council of the European Union, 2018, p. 1).

Lifelong learning focuses not only on maintaining employment and meeting industry needs but encompasses aspirations for social inclusion, active citizenship, personal fulfilment and health. In contrast, the 'mechanical-application' of CBT in Australia (Guthrie, 2009) has led to a narrow focus on assessment in curricular and teaching practices.

In addition, its prescriptive approach has removed the ability of VET educators to make their own judgements of competence especially in qualifications that need learners to understand and apply extensive bodies of knowledge (Hodge, 2015), such as we find in veterinary nursing.

The second and equally important message relates to pathways between educational sectors for lifelong learning. The international examples defined competence to include the personal capabilities that enable continuous learning. Building capacity for further learning and enhancing pathways were key underpinning principles for the international systems we reviewed.

Similarly, all providers interviewed in our study recognised that students are likely to move across and beyond the industries for which they initially train, especially Cert II and Cert III students. While such pathways are recognised as important to Australia's VET system, differences in curriculum across educational sectors (school, VET and higher education), a lack of guidance on how to develop lifelong learning capability in students and the prescriptive detail of Training Packages pose formidable barriers to these pathways (Hodge et al., 2024).

The building blocks of a broader concept of competency have been identified by Australian VET researchers since at least 1990 when Gonczi and Hagar (Gonczi, et al., 1990; Hagar & Gonczi, 1996) argued for an 'integrated' or holistic approach that combined technical skills with personal capabilities. A broader conception that embraces both individual capability and technical skill was advocated in Schofield and McDonald's (2004) review of Training Packages and in Beddie et al.'s (2017) study. Most recently Misko and Circelli (2022) again looked into this issue, noting:

> The need for a broader conception of what it means to be competent, one that explicitly acknowledges the importance of 'non-technical' skills and capabilities, those such as critical thinking, learning from others, collaboration, creativity and innovation, and self-direction, and their role in helping learners to transfer the knowledge and skills acquired in one context to another. (p. 1)

A broader concept of competency for Australian VET could positively impact the design of competency standards, and thus signal to quality providers that the work they already do to value-add to what is described in Training Packages is appropriate and valuable.

The interviewed providers displayed positive regard for technical accomplishment and at the same time emphasised that such skills need to be seen in a broader context of knowledge (Cert IV) and personal capability (Cert III, Cert II).

Reflecting on the translation practices of the providers in our study, we suggest that a broader concept of competency is already in play that acknowledges both bodies of knowledge (where these are crucial foundations of technical expertise) and the capabilities and capacities that enable confidence, resilience, agency and learning throughout working life.

We therefore recommend an expansion of the Australian VET definition of competency to acknowledge the diversity of needs and types of work the system addresses. A concept of competency for a contemporary Australian workforce would embrace technical skills, knowledge systems and individual capability in a balance appropriate to the current needs and future aspirations of students and industry (see Recommendation 10).

Good practices

This section describes six good practices in learning resource design reported by provider participants or observed by researchers during our site visits and interviews.

The study sites, recruited through JSC networks, were a selective sample, nevertheless it was surprising that each modelled some outstanding translation practices. Given the providers' broad demographic and delivery range we expect that these practices will be of interest and use to other providers.

The following discussion outlines the six practices, their alignment with the proposed translation model and provides tips facilitating each practice.

Collaborative, educator-led translation

The majority of provider participants strongly emphasised the critical importance of educator involvement in translation.

As discussed in the Findings and analysis chapter, educators – educational leaders and teacher/trainers/assessors – engage in various ways across the full spectrum of pre-translation, translation and mobilisation processes.

Educators participating in this study were generally happy with their role in face-to-face delivery, but expressed varying degrees of satisfaction with their role in translation. Site 7 educators stood out for their high-level satisfaction with the translation process and the innovation that resulted from their collaboration with other provider staff. This approach demonstrates the power of collaborative, educator-led translation.

Site 7 has implemented an outstanding collaborative approach to training product translation in a large, stand-alone public provider which could be adapted for providers of all sizes.

The CEO established a small curriculum team, independent of its quality and compliance team, to work collaboratively with educators on translation. They use the Course Design Intensive (CDI) methodology to lead a highly collaborative approach focusing on innovative, future-focused learning:

> "[We] do a lot of background work before we actually get to see a team of people… because what we find is that some of our teams, we might walk in and they might say, look, let's just rebadge it because we really like what we do now. So it's working through that kind of change process. And, and also very collaboratively, it's not, you know, we'll, we'll guide, but, you know, we're the guide on the side and the collaborator and, and we try and do a bit of fun stuff so they engage really well. And this process that we do is the CDI." (Senior Education Leader, Site 7)

The review process leading to registration on scope is also collaborative:

> "So we have a review panel which is all the team who've worked on it, including our team, quality team who've, who've done the final. So quality team oversee the final review and then it'll go into our Course Advisory Committee for endorsement." (Senior Education Leader Site 7)

Site 7 educator and curriculum staff all expressed high levels of satisfaction with this process exemplifying:

- The centrality of educators' knowledge and experience in the translation process
- The benefits of educator, quality and compliance specialist collaboration in designing high quality as well as audit-proof resources
- The collaborative approach to compliance processes.

Tips for facilitating collaborative, educator led translation

The CDI approach, originally developed at Oxford Brooks University, employs facilitated, evidence-based, collaborative stakeholder workshops to design a course (Dempster et al., 2012). Published evaluation of CDI practice and Site 7's experience show that for a successful CDI approach it is important to:

- Involve all stakeholders – educators, quality and compliance staff, e-learning and other education design specialists to contribute the full range of expertise needed for the design process
- Ensure that resources are allocated and background work done before workshops
- Plan and organise well-designed workshops and effective facilitation
- Focus workshops on tangible design outcomes
- Share and challenge ideas from different stakeholder perspectives to develop innovative course designs.

Deep roots in community and industry

As discussed previously, a Certificate III in Agriculture provider (Site 8), and other participating providers are deeply connected with local communities and industries. Agricultural industries are inextricably knitted into Site 8's rural community and teaching staff and students share histories and relationships going back many decades. Educator-led learning and work plans for placement or trainee experiences on farms are embedded in multi-generational relationships and shared knowledge between agriculture educators, students, employers and families:

> "I taught Tim [pseudonym]. I taught him Certificate II, Cert III, Cert IV. And then he went home to the farm. He rang me a couple of weeks ago to say, 'Dad's handed the farm over. I'm now managing. I want to put a staff member on and I don't know how to do it.' And I said, 'Okay, mate, what do you want to do?' And he goes, 'I don't know. Can you come out?' So I went out, we sat in the dairy, mum came, dad came, Tim came, the student came. And we just started talking. And Tim goes, 'I want him to learn the things that you taught me, Anna [pseudonym], because that's the stuff he needs'… And his dad's saying, 'Tim came home and taught me how to do things and we've changed what we're doing on our farm because of that." (Education Manager/Educator, Site 8)

The provider relies on access to farms through its industry networks for individual students' work experience and specific whole class activities:

> "There was a local farm out at … that had about a 1000 head of sheep that were coming in. And so, we had a three-week rotation with a group of 40. We broke up into small

groups and over three weeks, one group rotated and went out and done a couple of hundred head of capsuling sheep. And then obviously there were some lambs that came in too, so they were a part of lamb marking as well." (Education Manager/Educator, Site 8)

Tips for working with community

Although this degree of interconnectedness is usually associated with rural communities, urban providers also have opportunities for building learning communities with their industry partners and local organisations.

All providers benefit from deep connections with their current and past students, local employers and community stakeholders as a basis for long term benefits for learners and industries. Providers can deepen these relationships by looking for opportunities to strengthen sustained and broad relationships across their student, graduate, employer and community stakeholder networks. Some providers do this by:

- Building an alumni network amongst their graduates
- Hosting events of interest to employers and community organisations
- Supporting community philanthropic activities
- Supporting local employers through provider innovation and applied research projects.

Designing for inclusion

Providers 9, 10,11 and 12 described how they design their Certificate II in Rural Operations delivery to build the capabilities disadvantaged learners and their communities in locations such as remote cattle stations, in Indigenous and other isolated communities and correctional institutions.

As already described, these providers supply appropriate paper-based learning resources. But the most important learning resources are training staff who can support skills development through strengthening the capability of learners and their communities. Site12 is based in a large shed on an industrial estate.

Each morning, various staff go on a run to gather the participants and on a given day up to 50 assemble. For the participants the day begins with entering a circle where they are each expected to express on a scale of one to 10 how they are feeling. Within the circle, conditions of absolute respect are maintained and the participants will consider each other in the light of their rating for the day, checking in or taking care to respect their need for distance.

Activities for a given day are divided between those that can be undertaken in the shed and those in outdoor settings. The shed is divided into several booths each equipped with tools and materials for a particular skill.

Appliance repair, carpentry, welding, metal cutting and bending, small machinery maintenance, art and crafts and cooking are undertaken in the shed. Outdoor options include mowing, fencing, construction, drone operations, and landscaping.

Senior staff designate participant groups that are assigned a staff member to undertake activities based on one of the catered skill areas. Drinks, coffee, tea, snacks and meals are available at the shed.

Certificate II educators described making great personal efforts to provide the equipment and other physical resources needed for skills development:

> "I drove 300 kilometres last week to get to [Destination], the notorious [Destination]. Once I crossed that, I did another 200 kilometres...to get to a community to go and do training there. Now, if I'm very lucky, I may be able to do three or four visits to a community like that a year. But it's never going to be enough for them to get a qualification...But in the meantime, there will be St John's delivering a first aid course, there will be somebody else delivering a chainsaw course, somebody else delivering skid steer or forklift training, or something or other. At the end of the day, those guys have actually done quite a bit of training, if we take all of that into account. Then we will get to stage where we go, okay, well, actually, you've done 14 units, and all you really need to do to get a qualification out of this is maybe one of the core units and something else." (Educator, Site 11)

Tips for designing for inclusion

All four Cert II providers demonstrated multiple ways of including disadvantaged learners in vibrant learning communities such as:

- Employing staff with the skills and motivation to embed learning experiences in activities and relationships that the develop the whole person
- Supporting learning by ensuring that basic needs are met e.g. transport and food
- Using pedagogies that accommodate differences in language, literacy and numeracy
- Being prepared to travel to the learners' locations
- Offering skills development opportunities that learners need to become employable, contribute to their communities, or build self respect.

Authentic learning using simulation

Many of the interviewed providers described creating authentic learning and assessment experiences which they clearly regard as good practice. They described how they assemble educators with deep industry experience, industry-standard equipment and facilities on campus as well as real workplace-based opportunities to create authentic learning ecosystems. They also discussed the challenges they face in providing authentic experiences given lack of availability of equipment or facilities, adverse weather conditions, unpredictable animal behaviours and life events. The majority of providers reported using some physical or virtual simulation, but two providers stand out for their exceptional use of simulated industry environments to overcome challenges to authentic learning.

Provider 1 delivers a campus-based full time veterinary nursing course. Students work shifts in the provider's high fidelity veterinary training facility which comprises a veterinary clinic with operating facilities, a grooming parlour and several animal colonies to support the program.

The provider coordinates a selective case load to provide an authentic learning experience for these students who are not employed in veterinary practices. They rotate through course-aligned tasks such as consultation, reception duties and surgical shifts on campus alongside their classroom-based studies. In addition, they undertake the standard 240 hours of veterinary industry

placement in industry practices. In evidence of the quality of this training, many of the full-time students are snapped up by practices during their course:

> "Over 90% of our graduates are employed based on their training...So half of the week they are spending in our clinic, half of the week they are spending in classes, and yeah, so assessment and delivery is all done in that authentic space." (Education Manager, Site 1)

Full-time students also access a large range of print and online resources available to all students. These include a virtual veterinary practice which complements hands on learning in the on-campus clinic and on work placement. Importantly, the on-campus clinic also supports veterinary teaching staff to maintain their clinical currency, a critical ingredient in the success of the simulated practice.

Provider 5 creates authentic virtual learning spaces to overcome the need to schedule learning around the availability of farm work experiences and the seasons. This provider has fitted out a production studio incorporating equipment to develop learning resources incorporating virtual and augmented reality:

> "Now, technology is … providing us opportunities through virtual reality, augmented reality, 360 videos, all those sorts of things where we can go out and interview and speak with people at exactly the right point of the year in exactly the right crop, which is at exactly the right stage. And then students are able to have that mixed reality experience where they might walk through that crop, but it's the off-season." (Senior Education Leader, Site 5)

Tips for building authentic learning and assessment experiences

The sophisticated simulations developed by Providers 1 and 5 are expensive to establish but offer models for more modest approaches. For example, Provider 5's virtual projects demonstrate types of learning resources that may become commercially available in the near future as the technologies become more common. Micro versions of Provider 1's elaborate physical veterinary practice can be established within existing training facilities through designing learning experiences to closely mimic workplace practices. The implementation of policies, procedures, behaviours including hours of work, uniforms, customer service practices can build learners' capabilities for transferring their learning into good workplace practice. The Provider 5 team recommend:

- Providing students with the physical resources the Training Package requires – in their case access to dogs and cats and pocket pets and other small animals assumed in the Training Package
- Plan for learners to have successful experiences in the simulated workplace e.g. Provider 5 staff 'cherry pick…beautiful dogs and cats coming in who will allow a student to hang on to them for a veterinarian to do something to them'
- Ensure students are well supervised and if something goes wrong intervene to convert the problem to a successful learning experience.

Weaving knowledge into competencies

In *Unlocking the Potential of VET, t*he QRDG (2024) emphasises the urgent need for VET qualifications to deliver higher order knowledge as well as skills to better prepare graduates for lifelong work and learning. All the veterinary nursing sites described a focus on veterinary knowledge that extended beyond the specifications of the Training Package units, providing examples of what future, more knowledge-focused learning might look like. As discussed previously, these providers are committed to the professionalisation of veterinary nursing through the development of knowledge as well as skill.

The teaching staff, some of whom have postgraduate education qualifications, draw on more academic approaches to knowledge development than is common in VET qualifications. They refer to standard veterinary nursing textbooks, journal articles and other professional references to design often substantial learning resources. They also apply teaching methods like case study discussions commonly used in health education:

> "We don't lecture at them. We present cases and it's an open discussion that is very much dependent on who turns up as to how those discussions go to help them bridge that gap of what I'm learning and how does that apply in my workplace…If we see every student really struggling to understand diabetes, our rolling sessions will have maybe three or four different cases about diabetes control." (Educator/Learning Designer, Site 2)

Many of the veterinary nursing participants knowledge underpinning skills may be best learned through a more traditional, systematic approach to the body of knowledge. They point to the introduction of the current Certificate IV anatomy and physiology unit as a step towards recognising that this theory:

> "Underpins practically every unit in your nursing and yeah, and previous incarnations and the previous Training Packages didn't have an explicit subject called anatomy and physiology knowledge it was just in every unit and it was like anatomy and physiology in relation to admission and discharge, in relation to CPR … I think it was 2018, it was made a specific subject which is hard to assess but it's great because you can teach them everything and then you still make reference to it." (Senior Education Leader, Site 4).

Tips for weaving knowledge into competencies

Among the Cert IV providers, approaches to incorporating knowledge into the development of competency include:

- Staff undertaking higher level qualifications including postgraduate education
- Reference to internationally recognised veterinary nursing textbook as well veterinary medicine texts and academic articles
- Development of substantial theory-based learning resources
- Application of pedagogies such as case study analysis that develop the capabilities needed to apply knowledge in practical clinical situations.

Enhanced qualifications

Provider 6 designed its Certificate III in Agriculture course for young learners focusing on their personal development as well as their technical skills. This provider has a clear vision for the personal capabilities as well as the skills young people need to enter agricultural careers:

> "We think about who we're producing. We start with what is it that industry needs and who are we trying to produce. To that end, we try to give our Cert III students a broad understanding of agriculture. So, we expose them to more than the minimum number of units…we deliberately provide the opportunity for them to train in more units than the minimum required under the packaging rules and that's because we're trying to provide a well-rounded agriculturist who is not specialised in a particular area." (Senior Education Leader, Site 6).

To achieve this vision, Provider 6 has designed some additional unaccredited modules for delivery in addition to the required 16 Training Package units, offering graduates an additional in-house award as well as the national qualification. These units provide opportunities for person growth and development in an agricultural context, such as unit requiring students to complete an individual farming project. The provider carefully navigates compliance requirements to provide this enhancement.

Tips for enhancing qualifications

Some providers may have capacity to offer additional units or modules in the way that Provider 6 does.

However, there are other approaches to developing capabilities not explicitly addressed in Training Packages:

- Several providers described how they design learning experiences to develop transferable skills. This was most done by ensuring that students are given opportunities to apply their skills in different contexts for example by using different equipment or working with a variety of different animals. Research supports these providers' observation that important capabilities such as resilience and adaptability can be developed by purposely teaching students to make connections across different contexts (Gebaur et al., 2020; Hannon et al., 2018).
- Pedagogies that involve problem solving and critical thinking can also be used to build broader capabilities and the veterinary nurse case study approach discussed above is a good example.

These six good practices in translation are holistic and thus cut across the pre-translation, translation and mobilisation phases. Table 4 below helps to show how the practices relate to each of these phases.

Table 4: Good practice examples in applying the pre-translation, translation and mobilisation stages for course and learning resource development

Good Practices	Applying good practices in translation

	Pre-Translation	Translation	Mobilisation
Collaborative, educator led translation	Educational strategy leads qualification decision making in collaboration with other corporate portfolios during pre-translation	Educator led collaboration drawing on the experience and expertise of all stakeholders produces high quality and innovative outcomes	Teachers/trainers are responsible for implementation supported by education leaders, quality and compliance staff
Deep roots in community and industry	Strong stakeholder relationships yield information which influences course decisions	Strong stakeholder communities contribute advice and resources to translation activities	Industry stakeholders assist with validation, provide access to equipment and other learning resources
Designing for inclusion	Understanding of the targeted student cohort is a key consideration in course decision making	Translation processes focus on accessibility and acknowledge the primary role of teachers and pedagogy in inclusive learning	Implementation aligns cohort-specific ancillary services and unique facilitator/trainer skills with learning requirements
Authentic learning using simulation	The decision to use simulated learning environments may require long term investment and needs to be considered during pre-translation if not earlier	Designing physical or virtual learning environments can be resource intensive and needs to be a focus in translation activities	Educators may need professional development and time to develop the new pedagogical approaches needed for high fidelity simulation
Weaving knowledge into competencies	The decision to focus on knowledge as well as skill may require an institution level decision during pre-translation	Design learning resources and activities to build the identified capabilities and access to bodies of knowledge	Continual professional development of learning development and educator staff will be important to ensure familiarity with new pedagogies to support outcomes such as lifelong learning and other future focused capabilities e.g. Universal Design for Learning and Integrative Pedagogies
Enhancing qualifications	During pre-translation consider potential relationship between the organisation's strategic vision e.g. commitment to sustainability, building individual capability, lifelong learning Look beyond the single qualification to internal and	Consider library resources Consider any facilities or other resources that may be needed Where the provider delivers qualification suites, ensure an	

	external pathway opportunities Consider resourcing implications	integrated approach to learning design for the whole suite including any HE qualifications

Recommendations

Our research uncovered challenges and practices that suggest some ways Skills Insight and other Jobs and Skills Councils (JSCs) could enhance support for the translation process in providers. Some of the implications of the research, however, go beyond the remit of JSCs and relate to the VET system as such. Accordingly, this section presents two sets of recommendations, one relating to the work of JSCs and another to the system.

Recommendations for Jobs and Skills Councils

These recommendations relate to how Skills Insight and other JSCs could enhance their support for translation in providers. We envisage that these enhancements would improve the whole environment of translation rather than addressing particular components of the translation process.

1. We recommend that VET educators become more involved as vocational and educational SMEs in Training Package design.

Many reviews of VET have identified the impact of a perceived absence of an educator voice on the quality of Training Package development. As we have noted, providers are required to seek views of their own key stakeholders, including students and local employers which potentially adds richness to those voices that JSCs routinely access.

Our research findings strongly reinforce the view that the educator voice needs to be added to the Training Package process as their insights can help ensure an appropriate balance between local and more national needs in the endorsed Training Packages

The Training Package Products Development and Endorsement Process Policy (Department of Employment and Workplace Relations, 2022) notes that providers and educators are among the stakeholders that must be consulted in the initial development process. Educators might also be members of any technical committees established. Their voice is less clear in the second phase of public and government consultation, although it notes that:

> Feedback should be sought from different types of stakeholders on the training product's impact on industry and whether it meets industry skill needs as well as issues for training delivery and implementation, and whether it meets the needs of learners. (p. 16)

However, when feedback is incorporated, it is required to reflect broad stakeholder consensus, and if VET educators are not involved in the process this may be where providers and educators see their voice being lost to others, despite their critical importance in the effective translation of a finally approved Training Package.

Possible actions

- Existing provider and educator-based networks and Communities of Practice focused on occupational areas need to stay aware of Training Package projects and become involved throughout the development and review processes.
- JSCs could help to encourage and support the establishment of new educator networks and CoPs in a range of occupational areas covered by their remit.

- Training Package developers already have a requirement to ensure there is an appropriate balance between all the voices advising the process and providers need to take advantage of this to ensure that the provider and educator voice is being fully valued.

2. We recommend that Skills Insight and other JSCs have sufficient resources to promote, sponsor or host national VET educator networking events in each industry sector.

This is to build collaboration and share innovations and best practices in delivery and address common delivery problems.

The JSCs, providers and their educators have a mutual interest designing innovative, high-quality learning experiences. There are few opportunities for educators to participate in workshops or other events focused on sharing ideas about good practice specifically linked to the qualifications they deliver.

Possible actions

- JSCs are resourced to be able to sponsor and/or support forums and networking events that would give JSC staff insight into the factors influencing delivery as an input into Training Package design decisions. These could be undertaken independently using the JSCs' own networks or in collaboration with provider-based networks or special interest groups from within or outside peak provider bodies as highlighted in Recommendation 1 above.
- Networking would become even more potent if it involved industry input and voices when requested by these educator networks. Such events could be undertaken face to face and/or using technologies to promote the widest possible access. In addition, they should include both real time activities as well as being recorded/reported in ways which enable those not able to participate on the day to gain the benefits of the event. This requires that there be both effective promotion and ready access.
- The approach should also allow for more serendipitous needs-based networking by the network members.

3. We recommend that Skills Insight and other JSCs consider using simulations where appropriate, particularly in relation to assessment.

We heard from providers that the use of high-fidelity simulation in training is growing. We also saw physical and virtual simulation equipment at several provider sites and one provider has been given a significant government grant to develop virtual and augmented reality simulations for training.

VET educators informed us, however, that they cannot always use their high-quality simulation equipment under current rules expressed in Training Packages, and that their use may give rise to concern by auditors. In addition, providers may not be aware of changes to Packages that allow use of simulations, signalling a need to make important changes like these more visible to providers.

Possible actions

- Provide clear advice to providers when it is clear that simulation practices are appropriate in the delivery of training to meet both local and national needs, and especially where there may not be the possibility of assessing actual practice locally.

- We therefore note the need for the active involvement of regulatory bodies at the earliest possible stage in the development and approval process for Training Packages to ensure that inappropriate and unhelpful regulatory sanctions are reduced to a minimum to maximise flexible and innovative training practices by providers based on the Training Package.

4. We recommend that Skills Insight and other JSCs ensure language used in their Training Packages are easily understood.

This is so the words used do not place unnecessary restrictions on providers and educators using these training packages. Providers noted that clarity of language was critical to the translation process. Unclear language, typographical errors and other language issues complicated the translation process.

What will help therefore is greater clarity of language along with the possibility for providers to hear from Package developers directly about what is intended. This process could occur both during and following development process and once the Package has been endorsed and placed on training.gov.au for implementation.

Possible actions

- Establishing and promoting opportunities for dialogue between JSCs and providers offering their Packages/individual qualifications about the intents underlying the wording of Training Packages and their components. Online sessions and supporting discussion boards/forums could aid this process.
- JSCs carefully review the way in which the Packages are written to ensure that the language in them is clear and as easy as possible to interpret and translate. For example, one provider's suggestion was for Package developers to make more use of the word 'may' rather than 'must' as the latter mandates a requirement to demonstrate competence in ways that may not be possible. The word 'may' allows for alternative applications more appropriate to meet local needs.

5. We recommend that Skills Insight and other JSCs ensure Companion Volume content is useful and accessible to providers and educators.

Companion volumes, as non-endorsed components of Training Packages, have considerable potential to help providers with the translation process. Providers told us they would welcome more advice on the interpretation and translation of qualifications in addition to the kind of information currently provided in Companion Volume Implementation Guides. However, they do not find the current Companion Volumes as useful as some have been in the past.

Possible action

- We suggest that a group be formed with membership drawn from JSCs such as Skills Insight and providers delivering their Packages to develop best practice guidelines that complement existing Companion Volume template requirements to improve the utility and accessibility of companion volumes.

6. In relation to the qualifications studied actionable items for Skills Insight specifically include:

- For the Certificate II in Rural Operations – Skills Insight could emphasise the use of this qualification for individual and community development particularly amongst isolated and disadvantaged populations.
- For the Certificate III in Agriculture – the four providers participating in the study created similar, carefully designed courses for this (and the other Agriculture suite of qualifications) focusing on units that form a foundation for many agriculture occupations. When this qualification is updated as part of the proposed Qualification Reform program, Skills Insight could work with educators to identify where there can be more adaptable specification of tasks and performance to enable delivery of relevant and contextualised learning that builds transferable skills and knowledge.
- For the Certificate IV in Veterinary Nursing – when this qualification is updated as part of the proposed Qualification Reform program, Skills Insight could work with veterinary nurse educators to identify opportunities to more clearly specify the knowledge and general capabilities as well as the skills needed in veterinary nursing practice.

System level recommendations

These recommendations stem from reflection on the way key system features impact on the training product translation process in providers.

7. We recommend that at least one national site/agency be established and supported to act as a clearing house.

This is to enable providers and other bodies to share and/or purchase learning and assessment resources they have developed to support the delivery of individual Training Packages and their associated qualifications.

In the past the VET sector supported a series of agencies devoted to this process, including TVET Australia Product Services. This agency was part of TVET Australia and started life as Australian Training Products (ATP). It was a not-for-profit organisation that handled all nationally endorsed Training Packages and teaching and learning resources to support the delivery of VET in a wide range of industry areas, including both provider-developed and government-funded resources.

In the past such an agency supported a website allowing users to conduct product searches or browse an online catalogue, view samples and order online. It should be noted that the proposed agency would not evaluate or endorse the resources on it. Rather it would be an initial source of resources which providers could access and evaluate for purchase or use.

Possible action

- We propose that the establishment of such an agency be considered and, if appropriate, be re-established.

8. We recommend a review of funding models to recognise the real costs to providers of high-quality translation of Training Packages into learning programs and resources.

Our research found that the cost of the translation process is significant across the providers we interviewed. Nevertheless, a balance would need to be struck between supporting all providers to undertake this process or acknowledging the importance of at least partially offsetting this largely hidden cost in the present funding approach for providers. Potentially, one provider could take the lead on this work to reduce the amount of duplication and thus costs involved in the translation process. We note, however, that translation is inherent in provider and educator practices and thus some translation would always need to be undertaken at the provider level to address local and regional needs.

Possible action

- We propose that, initially, a study be commissioned to gather information on the cost to providers in translating Training Packages into learning programs and their associated teaching, learning and assessment resources. This research would advise any needed changes to policy and funding approaches and the suitability of approaches to reduce any unnecessary duplication of this work across providers.

9. We recommend that the TAE Package be reviewed in the light of the translation processes described in this project to ensure that the capabilities and attributes VET educators require to perform their translation roles are developed effectively.

An earlier section of this report looking specifically at the TAE Training Package and the units related to the development and use of resources by providers and their staff noted that there is little direct guidance on how translation subsequent to interpretation is undertaken.

The development of a Training and Assessment Strategy for each qualification is mandated and providers also develop learning resources to support delivery. The competency to support these processes appears under-represented in the Certificate IV. It is possible that the skills to undertake translation may be best developed in higher-level qualifications, skill sets and micro-credentials in the TAE.

Possible actions

- A project could be commissioned to undertake a review of the current and emerging capabilities of VET provider staff and particularly their educators and curriculum, instructional design and learning support staff.
- On the basis of this review, SI and possibly other JSCs could advocate that in future reviews of the TAE Package, translation skills and knowledge are adequately addressed at the appropriate AQF level.
- A range of bodies (e.g. the VET Development Centre and others) could develop and implement a range of non-accredited programs and other professional development activities to support the curriculum expertise development and that staff have the opportunities to develop their expertise in Training Package translation. This would also help address

Opportunities 4 and 5 in the VET Workforce Blueprint concerned with initial and ongoing professional learning (see Skills and Workforce Ministerial Council, 2024).

10. We recommend an expansion of the definition of competency for the Australian VET system that acknowledges the diversity of learner needs and types of work the system addresses.

There has been debate for some time over whether the conception of competence in use in Australia is too restrictive and narrow. We also note that more holistic conceptions of competence are in use overseas. Such an expansion of the concept for use in Australian VET would help ensure that there is an appropriate balance between technical skills and the important underpinning knowledge systems and personal capabilities students need both immediately and in the longer term to remain employable but also have enriching lives and careers.

Such a reconceptualisation could also assist in facilitating pathways across education sectors (particularly VET and higher education) but also across AQF levels within the VET and higher education sectors.

We therefore recommend an expansion of the Australian VET definition that acknowledges the diversity of learner needs and types of work the system addresses. A fit for purpose concept of competency for a contemporary Australian workforce would embrace *technical skills, knowledge systems and individual capability in a balance appropriate to the current needs and future aspirations of students*.

Possible actions

- Make use of the current qualification reform process to review relevant literature and research to frame a revised conception of competence and prepare, disseminate and consult on the proposed reconceptualisation.
- Ensure that the design of future statements of competency as part of the qualification reform process reflect the expanded definition.
- Leverage an expanded definition of competency to enhance tertiary pathways, including those between VET and higher education, to help establish a lifelong learning mindset across Australian tertiary education.

11. We recommend that the purpose statements proposed by the QRDG consider how personal capability can be incorporated.

Our research suggests that the Purpose 3 statement described in the QRDG (2024) advice to Skills Ministers warrants expansion to include an emphasis on individual capabilities needed to navigate future work and life. This kind of capability is also relevant in the qualifications aligned to Purposes 1 and 2. This Recommendation aligns closely with Recommendation 10 and the possible reconceptualisation of competency proposed there.

Possible action

- QRDC, or ongoing processes beyond the life of the QRDC, considers the need for an expanded conceptualisation of competency and actively discusses its implications for the proposed purpose statements. This process will build on advice already given.

12. We recommend that the concept of curriculum be reclaimed and reintroduced as a critical aspect in the VET system to facilitate the process of translation of Training Packages to learning resources.

We recommend that curriculum be reclaimed as a critical aspect of VET that describes the creative work of providers and their educators to go beyond what is written in Training Packages (or any skill standard) to give students rich, engaging learning experiences. Curriculum is an interconnected set of activities that requires educational expertise to connect students to the job, industry and working life realities that are indicated in Training Packages.

As we note throughout the report the use of curriculum approaches has some significant history in VET. We argue that it is now time to reintroduce the concept of curriculum as a bridge between Training Packages and their beneficiaries.

Curriculum provides the conceptual context of the translation processes described in the report. In particular, curriculum allows us to understand translation that goes beyond the confines of a given Training Package. The potential re-introduction and increased focus on curriculum in VET could draw on experiences in the Australian school and higher education sectors and the use of curriculum in VET systems overseas.

We note that some of the providers interviewed, understood the concept of curriculum very well and leveraged this in their translation of Training Packages.

Possible actions

- JSCs and provider representative bodies advocate for the use of curriculum in Australian VET.
- Provider staff are trained in the development and use of curriculum concepts and processes. This could be done through a rethinking of the content of the TAE Package (See Recommendation 9 above) and other supportive processes – and particularly appropriate continuing professional development for VET teachers, trainers and expert support staff. This will be advised as the VET Workforce Blueprint (Skills and Workforce Ministerial Council, 2024) is implemented.

References

Australian Curriculum, Assessment and Reporting Authority [ACARA] (2024). *Senior Secondary Overview*. Commonwealth of Australia.

Australian Committee on Technical and Further Education [Kangan Report] (1974). *TAFE in Australia: report on needs in technical and further education, April 1974*, Australian Government Publishing Service.

Australian Qualifications Framework Council (2013). *Australian Qualifications Framework*. AQFC.

Australian Skills Quality Authority [ASQA] (2024). *Users' Guide to the Standards for Registered Training Organisations (RTOs) 2015*, *Version 2.3*. Australian Skills Quality Authority.

Bajada, C., Kandlbinder, P., & Trayler, R. (2019). A general framework for cultivating innovations in higher education curriculum. *Higher Education Research & Development, 38*(3), 465-478.

Barcan, A. (1979). Universities and educator training. *Vestes, 22*(1), 35-41.

Barnett, R. (2009). Knowing and becoming in the higher education curriculum. *Studies in Higher Education, 34*(4), 429–440.

Barabasch, A. (2017). Finding the Finishing Line – Career Support for Experimentation: Transitions and the Role of Lifelong Learning. In Pilz, M. (Ed), *Vocational Education and Training in Times of Economic Crisis. Lessons from Around the World* (pp. 25 – 41). German Research Center for Comparative Vocational Education and Training.

Bauer, W. & Gessler, M. (2017). *Dual Vocational Education and Training Systems in Europe: Lessons learned from Austria, Germany and Switzerland*. In Eicker, F., Haseloff, G., and Lennartz (Eds). Vocational Education and Training in Sub-Saharan Africa. Current situation and development (pp. 48 -66). Bertelsmann Verlag.

Beddie, F., Hargreaves, J. & Atkinson, G. (2017). *Evolution not revolution: views on training products reform*. National Centre for Vocational Education Research.

Benjamin, W. (1969). The task of the translator. In W. Benjamin, *Illuminations*, pp. 69-82, Shocken Books.

Billett, S. (2011). *Vocational education: purposes, traditions and prospects*. Springer.

Callon, M. (1984). Some elements of the sociology of translation: domestication of the scallops and fishermen of St Brieuc bay. *The Sociological Review, 32*(1), 196-233.

Cedefop (2010). *Learning outcomes approaches in VET curricula. A comparative analysis of nine European countries*. Research Paper no 6. Publications Office of the European Union.

Cedefop (2020). *Vocational education and training in Europe, 1995-2035: Scenarios for European vocational education and training in the 21st century*. Publications Office of the European Union. Luxembourg: Cedefop reference series, No 114.

Cedefop (2021). *European inventory of NQFs 2020 – Sweden*. Publications Office of the European Union.

Cedefop (2022). *The future of vocational education and training qualifications in Europe. Volume 1: the changing content and profile of VET: epistemological challenges and opportunities*. Publications Office of the European Union.

Cedefop (2023a). *The future of vocational education and training in Europe: 50 dimensions of vocational education and training: Cedefop's analytical framework for comparing VET*. Publications Office of the European Union.

Cedefop (2023b). *Vocational education and training in Sweden: short description*. Publications Office of the European Union.

Committee on the Future of Tertiary Education in Australia [Martin Report] (1964). *Tertiary education in Australia*. Australian Government Printing Service.

Council of the European Union (2018). Council Recommendations on key competences for lifelong learning, 22 May 2018. *Official Journal of the European Union, C189, 4th June 2018*.

Dawkins, J & Holding, A. (1987). *Skills for Australia*. Australian Government Publishing Service.

Deissinger, T. & Melnyk, O. (2024). Vocational teacher training in Germany from the governance perspective. In Deissinger, T. & Melnyk, O. (Eds). *Partnership-based governance and standardization of vocational teacher education in Ukraine, Vocational education, work and innovation (main series), vol. 82* (pp. 95–114), wbv Media GmbH.

Dempster, J. A., Benfield, G., & Francis, R. (2012). An academic development model for fostering innovation and sharing in curriculum design. *Innovations in Education and Teaching International*, *49*(2), 135-147.

Department of Employment and Workplace Relations (2022). *Training package products development and endorsement process policy*. Commonwealth of Australia.

Department of Industry (2014). *Review of Training Packages and accredited courses: discussion paper*. Commonwealth of Australia.

Eco, U. (2008). *Experiences of Translation*. University of Toronto Press.

Education Scotland (2024). *The purpose of the curriculum*. Government of Scotland.

Edwards, R. (2012). Translating the prescribed curriculum into the Enacted Curriculum in College and School. In Fenwick, T. and Edwards, R. (Eds), *Researching education through Actor-Network Theory* (pp. 23-39). Wiley-Blackwell.

European Commission (2019). *Key competences for lifelong learning*. Directorate-General for Education, Youth, Sport and Culture, Publications Office

European Union (2008). *The European Qualifications Framework for Lifelong Learning (EQF)*. Office for Official Publications of the European Communities.

Freeman, R. (2009). What is 'translation'? *Evidence and Policy 5*(4), 429-47.

Gallacher, J., & Reeve, F. (2019). FE and skills in Scotland: the implications of a policy led and 'managed' approach? *Journal of Education and Work, 32(3), 238–250*.

Gebaur, R., Wade, E. A., Kramer, S., Leary, M., & Sopper, J. (2020). Unique strategies to foster integrative learning in residential learning communities. *Learning Communities Research and Practice 8*(9).

German Qualifications Framework Working Group (2011). *The German Qualifications Framework for Lifelong Learning, adopted by the 'German Qualifications Framework Working Group'*. AK DQR.

Gessler, M. & Howe, F. (2015). From the Reality of Work to Grounded Work-Based Learning in German Vocational Education and Training: Background, Concept and Tools. International *Journal for Research in Vocational Education and Training, 2*(3), 214-238.

Giroux, H. A., & Penna, A. N. (1979). Social education in the classroom: The dynamics of the hidden curriculum. *Theory & Research in Social Education*, *7*(1), 21-42.

Gonczi, A., Hager, P. & Oliver, L. (1990). *Establishing competency-based standards in the professions*. Research paper no. 1 (National Office of Overseas Skills Recognition). Australian Government Printing Service.

Grubb, W. N. (2006). *Vocational Education and Training: Issues for a Thematic Review*. OECD.

Guthrie, H. (2009). *Competence and competency-based training: what the literature says*, National Centre for Vocational Education Research.

Hager, P. & Gonczi, A. (1996). Professions and competencies. In Edwards, R., Hanson, A. & Raggatt, P. (Eds), Boundaries of Adult learning (pp. 246-260). Routledge.

Hannon, J., Hocking, C., Legge, K., & Lugg, A. (2018). Sustaining interdisciplinary education: developing boundary crossing governance. *Higher Education Research & Development*, *37*(7), 1424-1438.

Harris, R., Barnes, G., Haines, B. & Hobart, R. (1985). *Competency based vocational education: an evaluation*, *Commissioned report no. 9*. TAFE National Centre for Research and Development.

Hodge, S. (2014). *Interpreting competencies in Australian vocational education and training: Practices and issues*. National Centre for Vocational Education Research.

Hodge, S. (2015). Alienating curriculum work in Australian vocational education and training. *Critical Studies in Education, 57(2)*, 143–159.

Hodge, S. (2024a). Towards curricular entanglements: Extending, complicating and reimagining curriculum work. *The Curriculum Journal, 35*(1), i-iv.

Hodge, S. (2024b). Curriculum work and hermeneutics. *The Curriculum Journal, 35*(1), 6-19.

Hodge, S. & Guthrie, H. (2019). *Moving beyond Training Packages: first steps*. AVETRA Secretariat.

Hodge, S. & Knight, E. (2021). *The best of both worlds? Integrating VET and higher education*, National Centre for Vocational Education Research.

Hodge, S., Guthrie, H., Jones, A., & Waters, M. (2024). Curriculum across the great divide: exploring a key problem of Australian tertiary education. *International Journal of Training Research,* 22(1), 31-45.

Jones, N. (1983). *National Core Curricula: Development and Implementation*. Report no. 1, TAFE National Centre for Research and Development.

Joyner, C. W. (1995). The DACUM technique and competency-based education. In Dennison, J. (Ed), *Challenges and opportunity: Canada's community colleges at the crossroads* (pp. 243-255). UBC Press.

Klassen, M. (2022). Curriculum governance in the professions: where is the locus of control for decision-making? *Teaching in Higher Education 27*(8), 1103-1119.

Latour, B. (1987). *Science in Action*. Harvard.

Law, J. (1997). *Traduction/trahison: Notes on ANT*. Centre for Science Studies.

Legislative Council Secretariat (2022). *Vocational and Professional Education in Germany and Singapore*: Information note IN01, Research Office.

Mardiana, A. B., Boon Y. K. & Aznan A. B. (2020). Enduring issues within Singapore's TVET. *Asia Pacific Journal of Education, 40*(4), 472-484.

McBeath, C. (1986). *Curriculum decision making in TAFE*, TAFE National Centre for Research and Development.

Misko, J. & Circelli, M. (2022). *Adding value to competency-based training*. National Centre for Vocational Education Research.

National Quality Council (2009). *VET Products for the 21st Century*. NQC Secretariat, TVET Australia.

National Quality Council & Council of Australian Governments (2009). *VET products for the 21st century: final report of the Joint Steering Committee of the NQC and the COAG Skills and Workforce Development Subgroup*. NQC Secretariat.

National Training Board (1991). *National competency standards: policy and guidelines*. Australian Government Printing Service.

OECD (2022). *The Landscape of Providers of Vocational Education and Training*, *OECD Reviews of Vocational Education and Training*. OECD Publishing.

OECD (2023a). *Education at a Glance 2023: OECD Indicators. Country Notes. Australia*. OECD Publishing.

OECD (2023b). *Building Future-Ready Vocational Education and Training Systems*, *OECD Reviews of Vocational Education and Training*. OECD Publishing.

Parkinson, K. & Broderick, J. (1988). *An evaluation of the implementation of national core curricula in Australia*. TAFE National Centre for Research and Development.

Qualification Reform Design Group [QRDG] (2024). *Unlocking the potential of VET: improving the relevance and transferability of vocational education and training qualifications*. Department of Employment and Workplace Relations.

Renold, U., Bolli, T., Caves, K., Bürgi, J., Esther Egg, M. Kemper J. & Rageth, L. (2018). *Comparing International Vocational Education and Training Programs: The KOF Education-Employment Linkage Index*. National Center on Education and the Economy.

Ross, E. (2024). Teachers' interpretation of curriculum as a window into 'curriculum potential'. *The Curriculum Journal*, *35*(1), 38-55.

Santos, L. & J. Cai (2016). Curriculum and Assessment. In *The Second Handbook of Research on the Psychology of Mathematics Education* (pp. 151-185). Brill.

Savage, G. C. (2018). A national curriculum in a federal system? Historical tensions and emerging complexities. In A. Reid & D. Price (Eds.), *The Australian Curriculum: Promises, problems and possibilities* (pp. 241-252). Australian Curriculum Studies Association

Schaab, K. (2020). From General to Interdisciplinary Studies: A Multi-Stage Curriculum Intervention. *Issues in Interdisciplinary Studies*. *38*(1-2), *57*-100

Scottish Government (2023). *Diversity of Provision: A Brief Description of the Post-School Education, Research and Skills System in Scotland*. Government of Scotland.

Skills and Workforce Ministerial Council (2024). *VET Workforce Blueprint*, Department of Employment and Workplace Relations.

Smith, P. L. & Ragan, T. J. (2005). *Instructional Design (3rd Edition)*. John Wiley & Sons, Inc.

Stacey, M., Gavin, M., Fitzgerald, S., McGrath-Champ, S., & Wilson, R. (2024). Reducing teachers' workload or deskilling 'core' work? Analysis of a policy response to teacher workload demands. *Discourse: Studies in the Cultural Politics of Education*, *45*(2), 187-199.

Standards for Registered Training Organisations (RTOs) 2015 (Australia)

Steiner, G. (1998). *After Babel: Aspects of Language and Translation*. Oxford University Press.

Tight, M. (2024). The curriculum in higher education research: A review of the research literature. *Innovations in Education and Teaching International*, *61*(2), 315-328.

Tucker, M.S. (2016). The Phoenix: Vocational Education and Training in Singapore. International comparative study of vocational education systems. Center on International Education Benchmarking.

UNESCO-UNEVOC (2020). *TVET country profile: Singapore [2020]*, UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training.

Wheelahan, L. (2016). Patching bits won't fix vocational education in Australia: a new model is needed. *International Journal of Training Research, 14*(3), pp.180–196.

Wibrow, B. & Waugh, J. (2020). Rationalising VET Qualifications: selected international approaches. National Centre for Vocational Education Research.

Wittig, W (2022). *Case study Germany*. The future of vocational education and training in Europe volume 2. Delivering IVET: institutional diversification and/or expansion. Cedefop.

Zumwalt, K. (1988). Are we Improving or Undermining Teaching? In Tanner, L. (Ed), *Critical Issues in Curriculum. Eighty-seventh Yearbook of the National Society for the Study of Education*. University of Chicago Press.

Attachment 1: Interview questions

Key question 1

What processes do you follow when developing a new training program based on national qualifications?

Sub-questions:

- How does your RTO go about developing a new training program? Do you recall the process for [case study qualification]?
- How does your RTO approach analysing Training Packages to develop a new training program?
- How does your RTO select, read, interpret and translate competencies?
- Apart from information from Training Packages, what types of information go into developing a new program in your RTO? (e.g. information about local employers, students, community, region) Do you recall what information influenced development of your [case study qualification]?
- What challenges, if any, does your RTO face in reading and using the competencies? For the [case study qualification], were there any issues with any of the competencies?

Key question 2

Who turns Training Package content into effective programs?

Sub-questions:

- In your RTO, what expertise and experience do people have who develop programs? Who are they?
- Is there a forum for discussing or sharing the problems and processes of reading competencies and developing training programs?
- What changes to competencies/Training Packages would help your RTO develop better training programs?

Key question 3

What are the features of effective learning resources that result from reading and development processes?

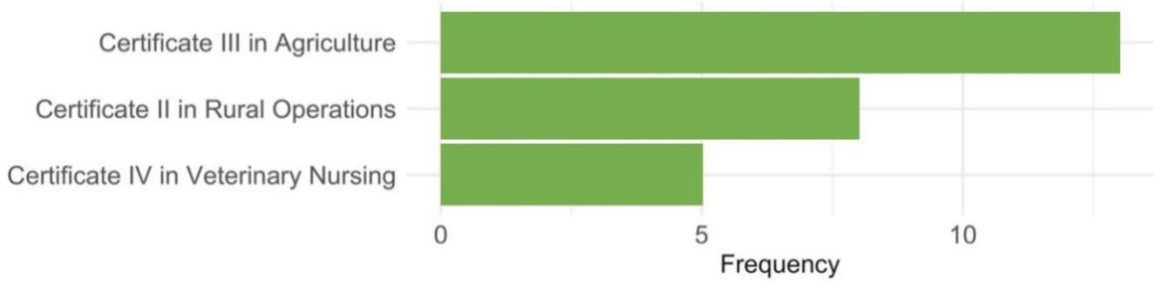
Sub-questions?

- In your RTO, are learning resources developed by third parties or internally or both?
- What are the features of good learning resources?
- How are learning resources updated to reflect changes in Training Packages?
- What strategies and plans accompany resources to provide support to educators/trainers?
- What role do educators/trainers have in developing and revising resources and strategies? Do they have scope to develop their own resources for their students?

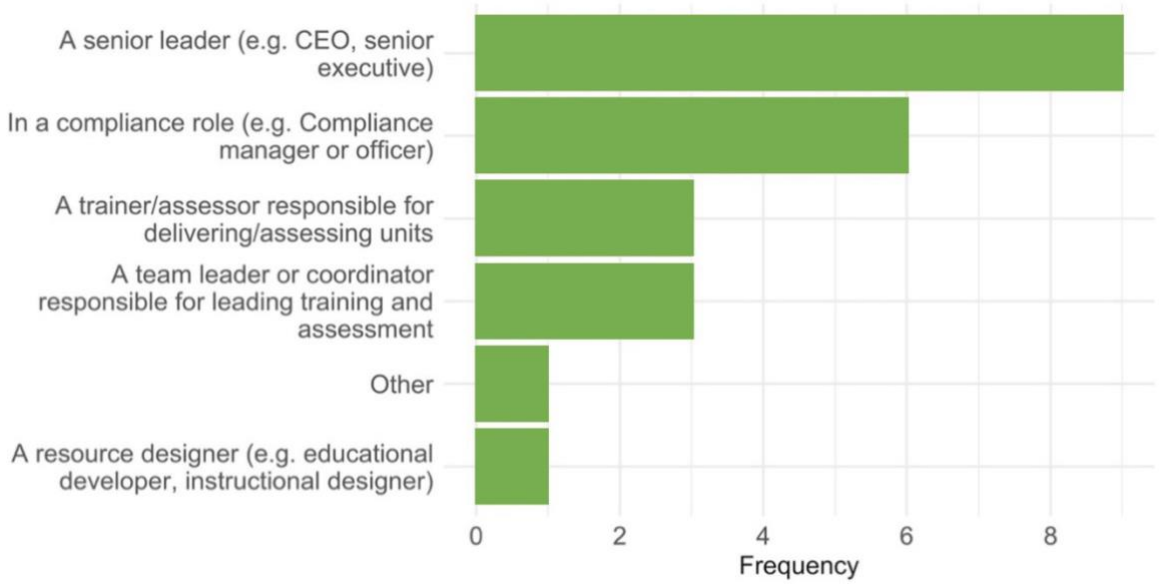
Attachment 2: Survey overview

The design of this research incorporated a survey to determine the extent to which findings from the qualitative part of the study were broadly typical of providers of the three case qualifications. A brief survey was constructed to explore key findings, with invitations going out to providers on a database maintained by Skills Insight that had not participated in the qualitative phase of the study. Ninety providers were contacted in this way. Skills Insight estimated that approximately 20 of these were not currently offering the target qualification(s). Twenty-three responses were received. Since the number of responses is relatively low, the decision was taken to summarise the survey results separately rather than incorporate them into the main report. Due to the low response rate, we recommend caution when interpreting the results.

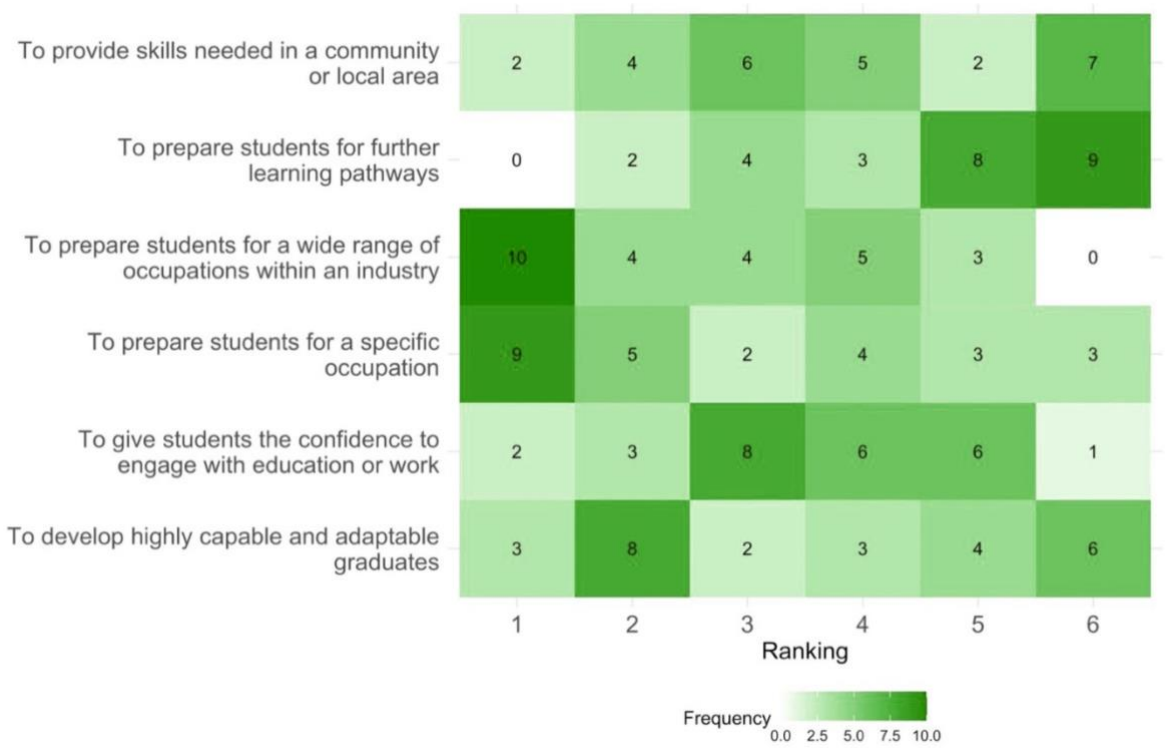
Respondents had the option of answering for more than one qualification. However, all responses were for a single qualification. The number of responses for each of the three qualifications is shown below.



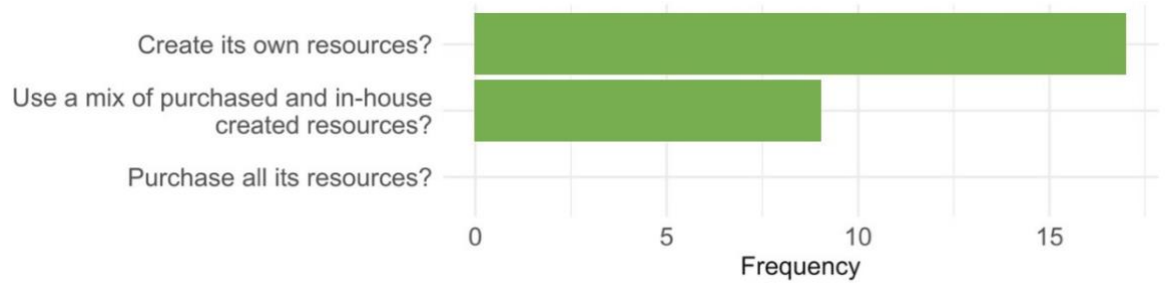
Invites went to senior staff with suggestion to forward the survey to the most relevant person. Respondents were from the following categories of staff:



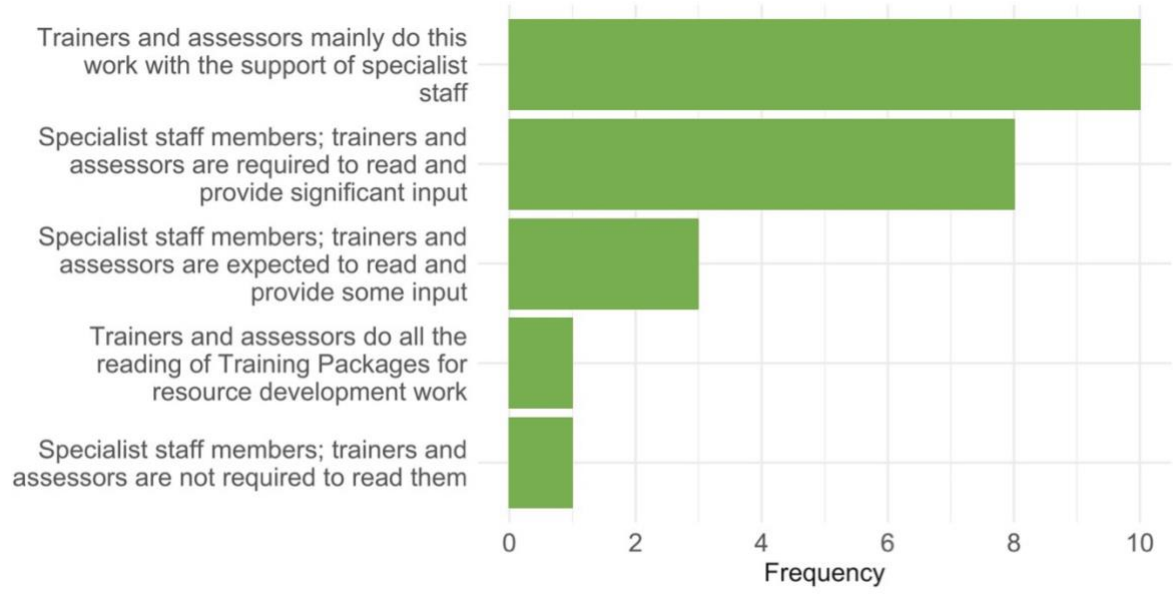
The qualitative data drew attention to a range of course purposes. The survey respondents were invited to rank outcomes in relation to their own courses. A heat map displays the results:



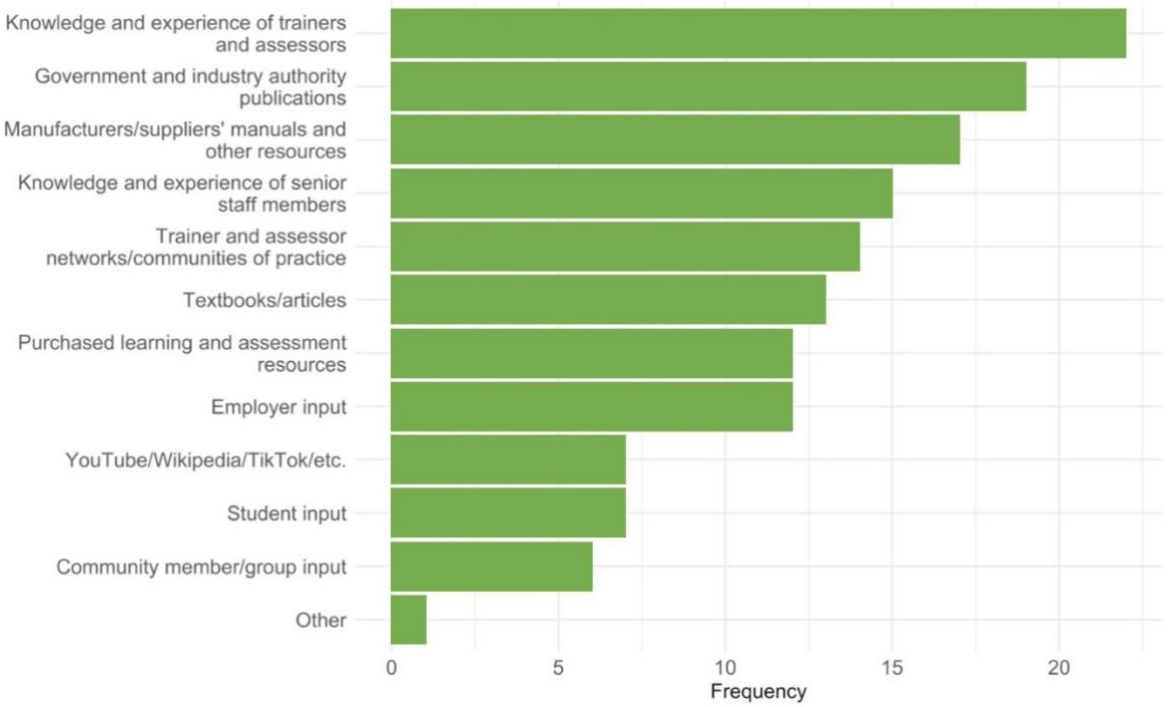
Survey respondents were asked whether they create their own resources, purchase resources, or use a mix. Results were:



In terms of who is responsible for interpreting Training Package content for resource development, responses were:

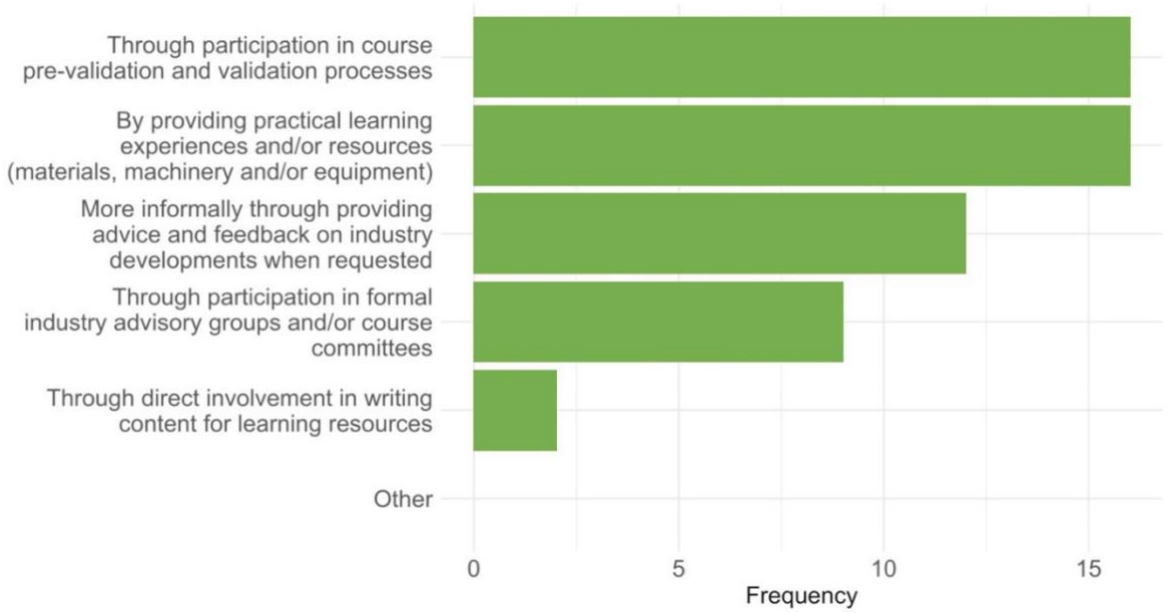


The qualitative part of the research suggested that substantial information is researched, evaluated and incorporated into learning resources. In terms of sources of that information, responses were:

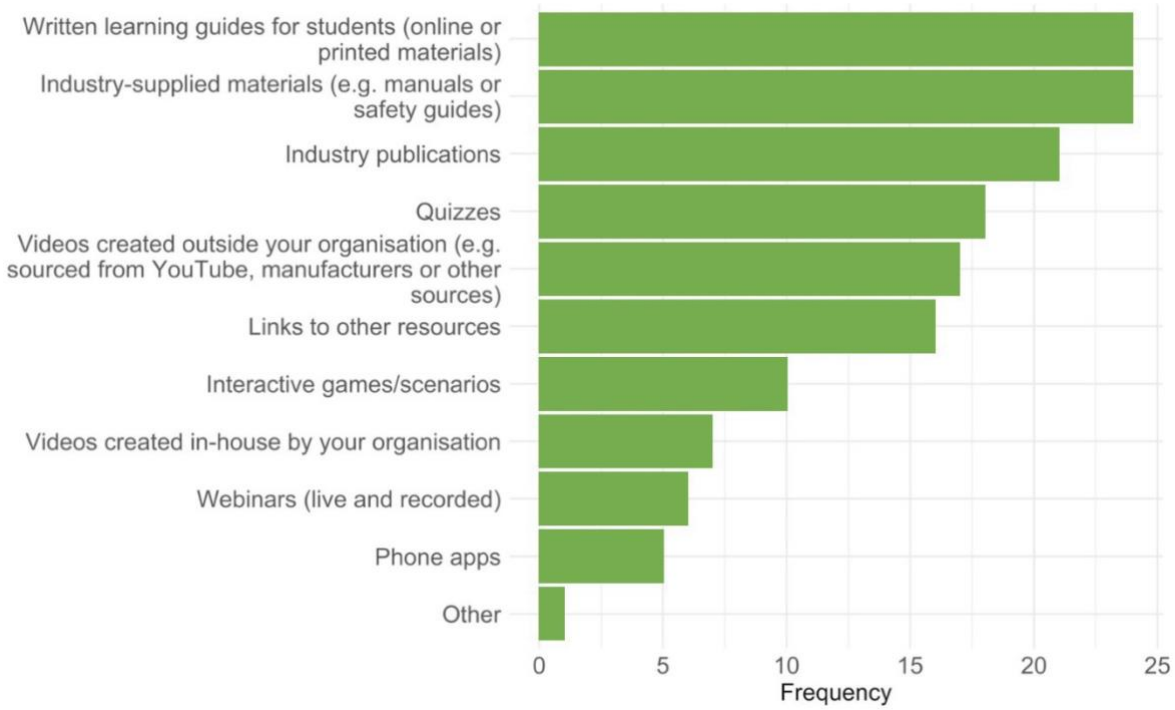


The single 'other' response referred to industry associations.

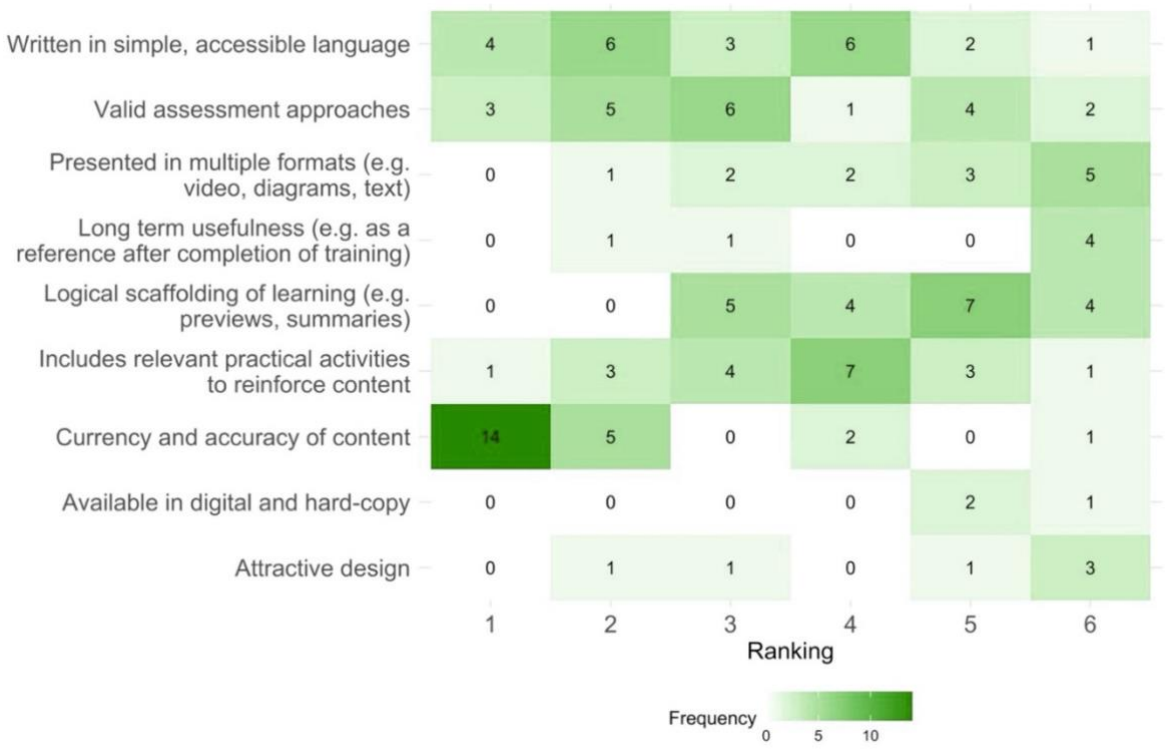
According to the qualitative findings, industry was involved in resource development in various ways. The survey asked respondents to indicate which ways industry is involved in their own development processes:



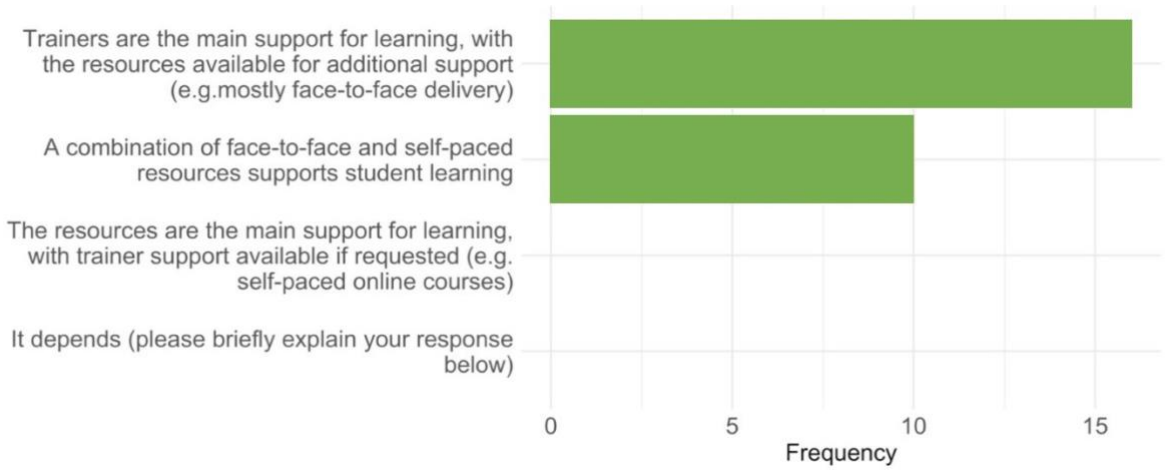
Survey respondents were asked to identify which types of resources they used to support learning:



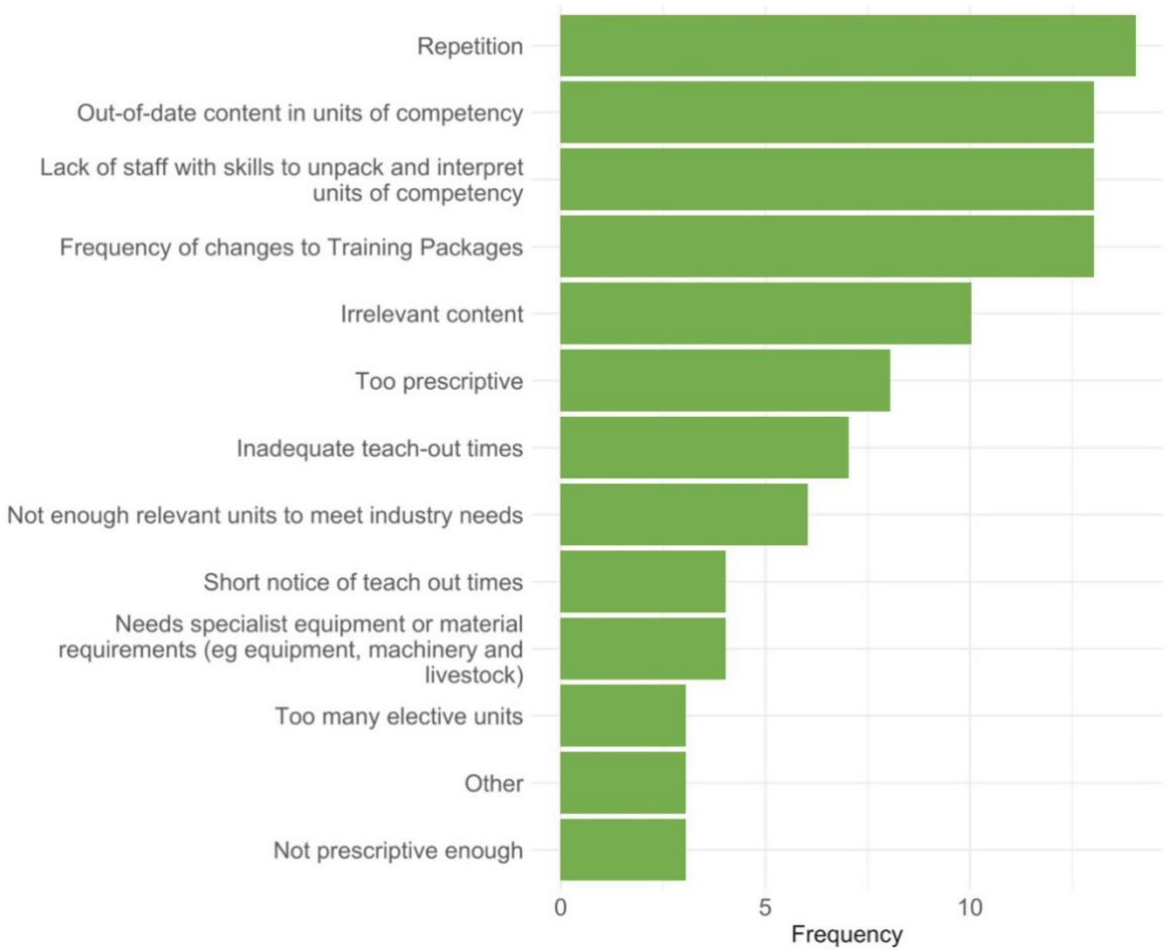
The qualitative data highlighted a range of features deemed important in quality resources. Respondents were given a list of features and were asked to rank them. The following 'heat map' shows which features were prioritised by the respondents:



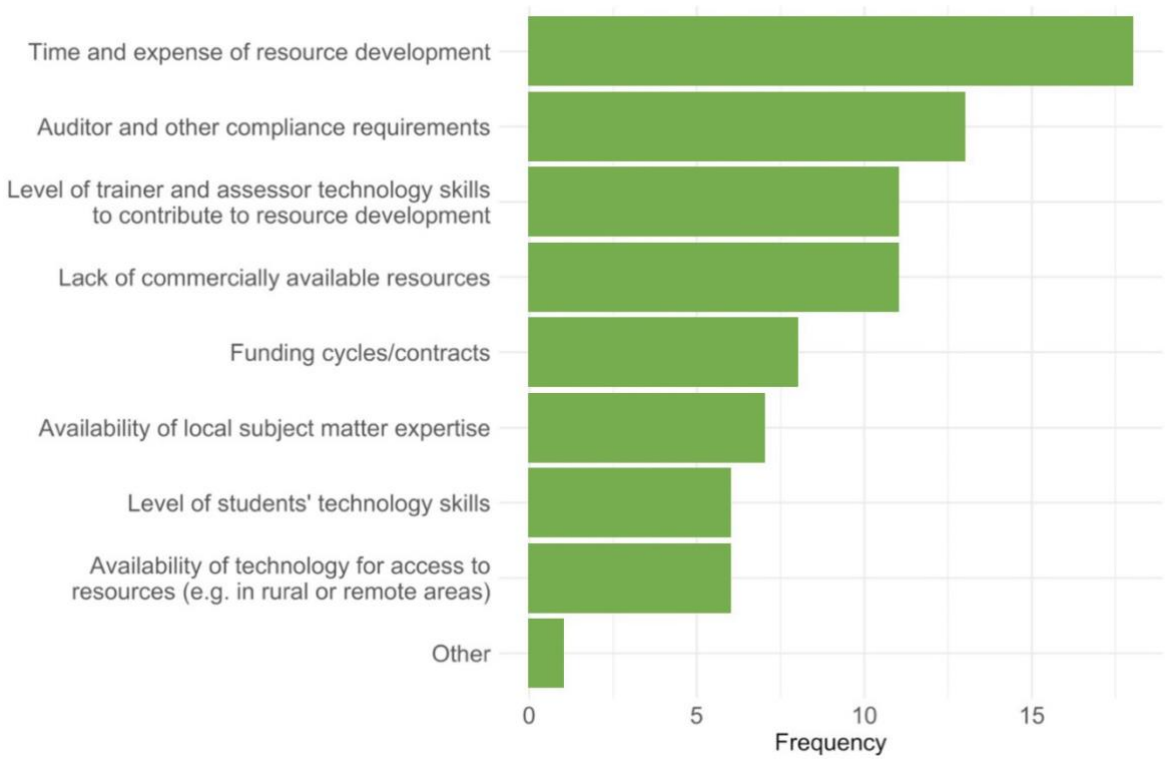
Finally, respondents were invited to indicate which resources their students depend on for their learning. Responses were:



Challenges to translation were discussed with research participants in the qualitative phase. Survey respondents rated those challenges as follows:



Some other issues were identified in the qualitative phase. Survey respondents were asked to indicate which of these were a challenge to them too:


Time and expense of resource development
Auditor and other compliance requirements
Level of trainer and assessor technology skills to contribute to resource development
Lack of commercially available resources
Funding cycles/contracts
Availability of local subject matter expertise
Level of students' technology skills
Availability of technology for access to resources (e.g. in rural or remote areas)
Other
0
5
10
15
Frequency

About the research

A collaboration with Griffith University

The research is the first systematic attempt to describe Training Package translation by VET providers. The project was commissioned by Skills Insight through an industry led activity process approved and funded by a Commonwealth Department of Education and Workplace Relations (DEWR) grant.

The Griffith Institute for Educational Research (GIER) at Griffith University was engaged by Skills Insight to conduct the research, which was undertaken between April and September 2024. The GIER team, comprising Steven Hodge, Anne Jones, Melinda Waters and Hugh Guthrie, worked together with Skills Insight to plan and manage the project. The Griffith University Human Research Ethics Committee reviewed and approved the research (Reference: 2024/264).

JSC Jobs and Skills Council
Agribusiness, Fibre, Furnishing, Food, Animal and Environment Care
An Australian Government Initiative

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