9 Lessons from existing taxonomies

Skills are at the centre of Australia's education system and labour market. Despite the importance of skills, challenges persist in responding to needs. A National Skills Taxonomy (NST) for Australia could help actors to align in a collective response.

Please consider the following:

1 What are the key **benefits** with existing skills taxonomies?

Australian Core Skills Framework (ACSF)

- Core competencies for Learning, Reading, Writing, Oral Communication and Numeracy.
  - When utilised by learning establishments, for the writing of training and assessment resources, help to empower learners at the learners' level.

Australian and New Zealand Standard Classification of Occupations (ANZSCO)

- Code for occupations providing information on the skill level of jobs, qualifications and/or experience needed to work in occupations.
  - Link between occupations and level of education required to enter the job market.
- Links to the Short-term Skilled Occupation List (STSOL), Medium and Long-term Strategic Skills List (MLTSSL), and the Regional Occupation List (ROL).
  - Link to specialist employment in shortage areas.

Australian and New Zealand Standard Industrial Classification (ANZSIC)

- Industry classes that reflect the way activities are actually organised in the real world.
  - Link between educational outcomes and job roles.

Australian Qualifications Framework (AQF)

- Qualifications, Units of Competency (UoC), Elements, Performance Criteria (PC), Knowledge Evidence (KE), Performance Evidence (PE) and Assessment Conditions.
  - Immense database of key criteria, Elements (Specialist Tasks), Performance Criteria (Skills Cluster) and outcomes related to employment pathways and lifelong learning.

Australian Skills Classification (ASC)

- Core competencies
  - 10 core competencies common related to all jobs, describing sets of non-specialist skills which can be utilised as a basis to further skills and specialities.
- Core competency values
  - 10-point scale describing the required proficiency for each core competency in each occupation.
- Specialist tasks
  - Useful for differentiating occupations, specialist tasks describe day-to-day work within an occupation.
  - If linked to AQF Qualification Elements, specialist tasks would be the link making Elements (Skills Clusters) transferable across occupations and sectors.
- Skills Clusters show clusters of similar specialist tasks.

2   What are the key **limitations** with existing skills taxonomies?

ACSF, limited understanding and uptake within certain industries and RTOs.

ANZSCO, use is unclear to individuals, employers and educators across multiple sectors.

- ANZSCO title should be qualification title.
- Skill level is the inverse of the ACSF level.

ANZSIC, use is unclear to individuals, employers and educators across multiple sectors.

AQF, Registered Training Organisations (RTOs) flexibility when selecting units within qualifications reduces certificated outcome transparency. Same certificate different skill sets.

ASC core competency values definitions are general and not specific to occupations. Lacking clarity.

- 100 core competencies covering 1600 occupation types
  - Not enough core competencies to cover 1600 occupations.
- Core competency values
  - Look like ACSF with alternate numbering, not SMART.
  - Look like AQF Performance Criteria (not occupational specific and therefore can be aligned over occupation and qualification boundaries, increasing skills set portability for individuals).
- Specialist tasks
  - Should align to Elements of AQF UoC.
  - *Each industry, institution, workplace and worker has their own language to describe what they do and how they do it.* This should not be down to each industry/ workplace! It should be about the transferable skill sets required for specialist tasks, allowing occupational mobility and supporting lifelong learning.
- Skills Clusters
  - Should align to AQF UoC; Knowledge Evidence and Performance Evidence.

3   What features from existing skills taxonomies are important to **retain** in a new NST?

ACSF, should be retained for education, promoted, advertised and enforced for all current and future qualification resources and outcomes.

AQF, alignment is key for this hierarchy and the alignment will empower the AQF

Skills Classification with more detail for aligned core competencies allowing qualification portability.

4   What features from existing skills taxonomies are important to **address** in a new NST?

The NST could be the language which creates a joined-up tertiary education system which allows movement from vocational to higher education through a transparent hierarchy of terminology.

The hierarchy of terminology should look at the conscious actions taken by individuals in the workplace, which could form Performance Criteria within the AQF.

By utilising the NST explicit foundation skills JSC would ensure any newly discovered object fits into only one category, which would reduce duplication in training packages and qualifications, whilst increasing skill set portability through Recognition of Prior Learning (RPL) (NST Vision).

Promotion of the ACSF to RTOs would enable a standardised understanding of the ACSF and how it should be applied, which should assist in empowering learners and facilitate improved learning outcomes.

10 Potential use cases for a National Skills Taxonomy

A National Skills Taxonomy (NST) can support a range of use cases with different benefits. The vision for a NST must reflect our collective aspirations. Principles should guide the Taxonomy's design and development, but trade-offs may be required to balance these principles effectively.

Please consider the following:

  1   Where could an NST best add value for individuals, employers and educators and how?

In vocational education there is a need for alignment between Qualification Levels, their Units of Competency and the associated Performance Criteria. All of which do not align with the ACSF levels, in certain Training Packages.

The Jobs and Skills Councils (JSCs) should have guidance on the rules for Technical Advisory Committees, specifically addressing the Legal and Technical requirements which guide the input for writing of Qualifications.

Overview:

An Act is the formal body of law that outlines your broad responsibilities.

Regulations set out specific requirements for particular hazards and risks and prescribe procedural or administrative requirements to comply with the Act.

Codes of Practice provide practical information on how to meet the requirements in the Act and Regulations.

If this understanding is embedded in the Jobs and Skills Councils Technical Advisory Committees it will reduce the number of personal points of view which can be seen in the current Units of Competency (UoC) and help with standardising skill sets across qualification sectors.

The NST should strive to align the ACSF/ AQF with State and Federal agency documents which give guidance on Supervision of Apprentices and Trainees, where supervision is determined by (1) The type of work; (2) Knowledge and skills of the apprentice; and (3) Competence of the supervising worker. This alignment would support occupational mobility.

AQF level 1 – **Assist** with the work under **Direct supervision**;

AQF level 2 – **Do** the work under **Direct supervision**;

AQF level 3 - **Do** the work under **General/ Broad supervision**;

AQF level 4 – **Supervise** the work;

AQF level 5 (Diploma) – **Coordinate/ Manage** the work.

  2   What are the potential unintended consequences or challenges of an NST that will need to be overcome?

If skills taxonomies are to be utilised by individuals, employers and educators then the benefits must be advertised to elicit the demand.

Volume of work required to gather, review and standardise core competencies, specialist tasks and skills clusters will be vast. However, alignment of the NST with the AQF and ACSF will bring portability to qualifications and the workforce.

JSCs will be required to standardise their training package content and meanings in line with the NST.

Australian Skills Quality Authority, plus TAC in WA and VRQA in VIC, will need to be consulted and engaged to help the NST move this forward.

3   What do you believe should be the overarching vision for the NST?

The NST is the Hierarchy of Words for qualification titles and performance criteria aligned to ACSF levels which will *improve connections between education and employment pathways, enabling future systems needed for lifelong learning, enhanced occupational mobility and career transitions, to address skills gaps and adapt to evolving economic and community needs.*

4   What guiding principles should underpin the taxonomy? Are there any non-negotiables?

Start with the end in mind! To date multiple companies have written lots of independent resources, using different wording to mean the same thing. Where the wording is different there can be no recognition of prior learning.

The NST should be the Hierarchy of Words and their meanings across the ACSF, ANZSCO, ANZSIC, AQF and Skills Classification which allows:

A.   Alignment of core competencies
B.   Portability of skill sets
C.   Opportunity in the workplace
D.   Standardisation of AQF Performance Criteria against workplace needs
E.   Reduction of AQF units of competency and qualifications on Training.gov.au

5   How should principles be prioritised if trade-offs are required?

Aligning the Hierarchy of Words to core competencies takes precedence over everything, because once it is in place the NST will be the guiding light.

11 Building a National Skills Taxonomy – design considerations

What should an NST look like? Considerations include:

1   Definitions and nomenclature
2   Structure (skill groupings and typologies)
3   Granularity
4   Information attached to each skill
5   Proficiency and levelling
6   Alignment to other taxonomies

Are there any additional features or key considerations for an effective design of the NST to support its use? Considerations could include supporting materials that will enable or better facilitate NST usage.

Definitions

The AQF and ACSF have a format for defining what is expected of an individual at each level, align to the ACSF to standardise what each level looks like.

Structure

The AQF units of competency have skill groupings, which need to be aligned (hopefully in partnership with the NST), where the skill grouping is the Element and the **Granularity** is the Performance Criteria.

Information attached to each skill

Industry has informed the Australian Skills Classification with regards their role requirements, and a working group could add to this the experience, required by the Standards for Registered Training Organisations 2015, the instructor's assessing competence in the all fields.

Proficiency and levelling

The NST Hierarchy of Words needs to include job functions against qualification level.

This would see Performance Criteria at different levels having certain requirements per level:

Diploma: Liaise with engineering, planners, local authority, b2b to raise work documentation.

Certificate IV: Review documentation and decide on tooling, manpower and resources, supervise hazard identification.

Certificate III: Receive documentation, select tooling, routes to job and safe working practices.

Certificate II: Receive instruction, select and wear appropriate PPE, collaborate with peers to select tooling.

Certificate I: Follow instructions and wear PPE, select and use tools to support peers.

Currently available for Certificate III qualifications, AVIW0022 - **Coordinate** aircraft movements and storage part of AVI30319 - Certificate III in Aviation (Ground Operations and Service).

If a Certificate III qualified person has the responsibility of coordinating, then what is the responsibility of a person holding a Certificate IV and above.

In the military when moving aircraft the Corporal or Sergeant, who were non-commissioned officers (supervisor/ manager), would coordinate aircraft movements. The aircraft technician (Certificate III) did not hold the delegated authority to coordinate aircraft movements.

A hierarchy of words for qualification titles would see this unit's title change to "Plan aircraft movements and storage".

Once broad responsibility levels are agreed the Units of Competence will have greater portability and in turn the worker and employer can build career pathways.

12 Building a National Skills Taxonomy: Implementation considerations

What are the most appropriate ongoing governance arrangements for the NST?

How should the NST be updated and maintained? Considerations include:

1   How skills are identified for inclusion, including initial identification and validation
2   The rate at which update should occur
3   The development of data quality standards or a data quality framework

Which storage or dissemination methods / infrastructure would be most valuable for enabling effective use of the NST?

How skills are identified

- Identify the industry with the most qualified workforce
    - Select most prevalent qualification on training.gov.au
    - Align and standardise Elements
    - Align and standardise Performance Criteria
- Identify the industry with second most qualified workforce
    - Select most prevalent qualification on training.gov.au
    - Align and standardise Elements
    - Align and standardise Performance Criteria
- Compare primary and secondary lists for similarities
    - Align and standardise Elements (1)
    - Align and standardise Performance Criteria (1)

The rate at which update should occur

- 30 days to identify the primary and secondary industries with the most qualified workforces
    - Use Power BI to identify which qualifications have been completed in the previous 4-years
- 60 days align and standardise Elements for primary and secondary industries
- 90 days align and standardise Performance Criteria for primary and secondary industries
- 120 days align Elements (1) and Performance Criteria (1) with data from Australian Skills Classification and employer feedback
- 150 days align Elements (1) with Specialist Tasks, Performance Criteria (1) with Core competencies Value description and Skills Clusters detail with Unit of Competency Knowledge Evidence and Performance Evidence
- 180 days publish the lists for consultation and feedback
    - Specialist Tasks
    - Transferable Skills
    - Skills Clusters
    - Core competencies
        - With links to AQF and ACSF
- Show which Jobs and Skills Councils have helped with the data
- Identify duplication in Units of Competency and Performance Criteria
    - Get buy in from industry and the JSCs

The development of data quality standards or a data quality framework

- I believe the NST should be a data quality framework, based on the hierarchy of professions and job roles, and the words associated with those roles.
- It should define at which position in a company and/or AQF level the words appear such as:
    - New starter/ AQF level 1: Assist colleagues with work

- o   Trade assistant/ AQF level 2: Under direct supervision complete the task
- o   Qualified/ trade qualified employee/ AQF level 3: Under general or broad supervision complete the task whilst training new starters or trade assistants
- o   Supervisor/ AQF level 4: Supervise employees

Which dissemination methods

Link the NST (hierarchy) to the ACSF, ANZSCO, ANZSIC, ASQA and AQF web pages, with JSCs and State Training Authorities helping to promote and disseminate the values and benefits of its use for improving connections between education and employment pathways, enabling future systems needed for lifelong learning, enhanced occupational mobility and career transitions, to address skills gaps and adapt to evolving economic and community needs.