ATSE

Submission to Jobs and Skills Australia

Submission to the National Skills Taxonomy update: Building a system that puts people and skills first

5 December 2025

Australia's workforce is experiencing rapid transformation, driven by emerging technologies, shifting economic priorities, and changing demographics. In this context, the development of a National Skills Taxonomy (NST) will be critical to capturing Australia's evolving skill requirements. The NST will serve as a vital tool for building a common, cross-sector skills registry and forecasting skills demand. By providing consistent definitions, reliably and frequently updating emerging skills, and integrating diverse workforce perspectives, the NST can act as a foundational resource for education, industry, and policymakers. It can enable stakeholders to plan, adapt, and ensure Australia's workforce remains resilient and future-ready. Without a robust and inclusive framework, skills gaps and mismatches could undermine workforce productivity and innovation. ATSE is pleased to see progress on developing the NST, as recommended by its 2022 report, Our STEM Skilled Future (ATSE 2022), and has continued to engage throughout Jobs and Skills Australia's consultation on the NST.

ATSE makes the following recommendations:

Recommendation 1: Regularly update and expand the NST's skills vocabulary, ideally with live workforce and job advertisement data.

Recommendation 2: Design the NST to be integrated into the Australian Qualification Framework to support alignment between qualifications and the NST.

Recommendation 3: Explicitly recognise and value non-technical skills, overseas qualifications, and Traditional Knowledge to ensure the NST is inclusive, equitable, and reflective of Australia's diverse workforce.

Integrating evolving and future skill requirements into the NST

Australia's skill and employment mix is constantly changing with the increasing development of emerging technology and shifting workforce needs. The clean energy transition, the growing need for social services, and the mounting pressure for more infrastructure will all lead to changes in existing and new skills (Sathanapally and Griffiths 2025). It is estimated that by 2030, 59% of the global workforce will require upskilling or retraining due to the skills demands driven by technological advancements, including artificial intelligence (AI) adoption, and underpinned by the high demand for analytical thinking and technical skills (World Economic Forum 2025). Jobs in science, technology, engineering and mathematics (STEM) will see significant changes in both the skills needed and careers available, with job growth expected to be twice as fast as non-STEM jobs at 7.4% (National Skills Commission 2022). This projected growth in jobs and emerging skills means the NST will need to be equipped to incorporate new and changing skill definitions while having the capacity to forecast future trends. This would enable the NST to remain relevant to Australia's education sector, workforce and policymakers.

To assist with Australia's rapidly changing workforce, particularly in STEM sectors, the NST, once developed, should consistently and regularly update and expand its skills vocabulary. Live workforce and job advertisement data could be used to track trends in the workforce and identify emerging skill demand. The use of the NST in job advertising websites and databases would support employees and employers to use a shared language to identify the necessary skill requirements for advertised positions. The NST will therefore need to grow and change as the workforce does. Artificial intelligence may also play an important role in making this happen. Advances in generative AI can be used to keep the NST up to date by identifying emerging skills and areas of growth or shortages for consideration by Jobs and Skills Australia (Gonzalez-Gomez et al. 2025). Additionally, a service for stakeholders to provide feedback and additions for the NST can offer further consideration on real-world perspectives. How the NST is developed and updated should be a transparent process, with information on new changes and how they were identified being available to the public.

Recommendation 1: Regularly update and expand the NST's skills vocabulary, ideally with live workforce and job advertisement data.

Ensuring alignment with existing frameworks and taxonomies

Previous taxonomies like the Australian Skills Classification (ASC) have faced interoperability challenges, notably gaps in alignment with the Australian Qualifications Framework (AQF) (Universities Australia 2024). This has led to varying definitions and differences in the interpretation of skills between stakeholders, limiting the effectiveness and adoption of these frameworks. Improved alignment is particularly important when considering bundles of skills or how skills interact, transfer, or apply across the education sector and labour market (Jobs and Skills Australia 2024). Skills are often present in individuals whose qualification is not a formal prerequisite for their role, especially in STEM disciplines. For instance, 82% of employers agree that STEM-qualified individuals add value to workplaces, even when STEM qualifications are not required (Prinsley and Baranyai 2015). These employers were noted to value skills such as active learning, critical thinking, and complex and creative problem-solving, demonstrating the importance of viewing qualifications through a skills lens (Prinsley and Baranyai 2015).

Through the integration of these taxonomies and frameworks, information on skills, occupations, and qualifications can become more consistent and connected, making their relationships clearer and helping to better align education with industry needs. Integrating the NST with existing frameworks, such as the AQF and the Australian and New Zealand Standard Classification of Occupations (ANZSCO), could enable future qualifications and occupational standards to be designed and updated with direct reference to the taxonomy. The NST should complement and be compatible with existing taxonomies by providing a more detailed and comprehensive coverage of skills and skill relationships. A complementary approach is also more likely to encourage uptake, as stakeholders can integrate the NST into existing processes. Learners should also be supported to demonstrate their skills to employers through a skills portfolio utilising the NST. This could be managed through a trusted government-operated system, such as an expansion of My eQuals used for verifying tertiary credentials, in alignment with work already undertaken to expand this system to the TAFE sector.

Recommendation 2: Design the NST to be integrated into the Australian Qualification Framework to support alignment between qualifications and the NST.

Embedding inclusivity and comprehensiveness in the development of the NST

Ensuring that transferable, non-technical skills are appropriately recognised within the NST would support comprehensiveness and support matching of jobs and workers. These 'soft skills' are often overshadowed by technical skills in both education systems and workplaces (Orih et al. 2024), and are also disproportionately demonstrated by women (Hong 2016). Incorporating these transferable skills within the NST would support the NST to be fit for purpose and widely accessible.

Migration will continue to be an essential component of Australia's plan to meet future workforce needs, especially as the population continues to age (Sathanapally and Griffiths 2025). Migrants already play a crucial role, particularly in STEM fields. Skilled migrants make up nearly 60% of Australia's engineering workforce and accounted for 70% of its growth from 2016 to 2021 (Romanis 2021; Briggs 2023). The NST will therefore need to ensure that skills and qualifications gained outside Australia are appropriately recognised and translatable to support migrant workforce participation and efficiently fill workforce shortages.

As an Australian NST, it is important that it meaningfully includes and reflects skills and competencies relating to Traditional Knowledge. This would support Aboriginal and Torres Strait Islander learners and workers to identify and communicate to employers the skills and potential career pathways associated with Traditional Knowledge, including in science and innovation.

Recommendation 3: Explicitly recognise and value non-technical skills, overseas qualifications, and Traditional Knowledge to ensure the NST is inclusive, equitable, and reflective of Australia's diverse workforce.

ATSE thanks Jobs and Skills Australia for the opportunity to respond to the NST Update: Building a system that puts people and skills first. For further information, please contact academypolicyteam@atse.org.au.

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