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Group of Eight Submission on the National Skills Taxonomy Discussion Paper

The Group of Eight (Go8) consents to this submission being published in full and notes that Go8 members may make individual submissions.

The Go8 recognises the Australian Universities Accord Final Report recommends the continuing development of a National Skills Taxonomy (NST) so that professional and vocational skill formation is more explicit and transparent. The Go8 is supportive in-principle for the development of a new NST provided definitions encapsulate the distinction between skills and knowledge; it provides clearly articulated use cases for stakeholders; and integrates and aligns with existing taxonomies such as the Australian Qualifications Framework (AQF).

Employment increasingly requires knowledge and skills attained through higher education. The Go8 universities play a critical role in contributing to knowledge and skill formation in Australia. The Go8 universities are responsible for a fifth of all research and development expenditure in Australia, educate more than one quarter of all higher education students in Australia and deliver 120,000 quality graduates each year. The Go8 universities produce more than half of Australia's science graduates, more than 40 per cent of engineering graduates, and award almost half of all research doctorates in Australia.

Summary of Go8 recommendations:

- A NST should make skill formation more explicit and transparent through the development of comprehensive and common definitions of skills and knowledge (and levels of both) so that stakeholders are using a "common language" and can make informed decisions.

- Both data driven and consultative approaches are necessary in developing a new NST. Consultation on developing a NST should involve input from experts in the higher education sector, including researchers who are at the forefront of developing and applying new technologies that flow through to new knowledge and skills broadly defined.

- A NST should encapsulate breadth and depth of coverage and include rich descriptions of defined skills and knowledge, without being overly detailed.

- A NST should provide interoperability with existing taxonomies such as the Australian and New Zealand Standard Classification of Occupations (currently under comprehensive review, with a new classification due December 2024) and the Australian Qualifications Framework (which is also the subject of reform recommendations).

- To achieve a common applied language, an NST must be widely disseminated, with information given to stakeholders on how to practically use it in their decision making.

- There should be direct representation from higher education bodies such as the Go8 Universities in the governance for an NST. Governance will also need to reflect the soon to be established Australian Tertiary Education Commission and include a data quality framework and ongoing review of the NST in terms of its effectiveness and application.

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Monash
University

The Australian
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The University
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Vision for a new NST

The vision and overarching principles of a new NST should be reflective of the Accord Final Report intent – to make skill formation more explicit and transparent, and to assist stakeholders to make more informed decisions. This in turn will assist in national skills development. In pursuing this vision, the NST should not overlook or underplay the importance of knowledge as distinct to skills, nor should a new NST attempt to override existing taxonomies that may already have stronger awareness and usage amongst stakeholders.

Benefits and/or limitations with existing skills taxonomies

There are several existing taxonomies, such as the AQF, Australian and New Zealand Standard Classification of Occupations (ANZSCO), Australian Standard Classification of Education (ASCED), and the Australian Core Skills Framework (ACSF), each with different histories, coverage, and applications.

The benefits ("usage cases") that can be achieved by existing and new skills taxonomies include assisting students and employees with both their skills and knowledge acquisition and recognition; making it easier for employers to verify the knowledge, skills and experience of future employees; and helping education institutions in setting curricula and facilitating students' education pathways and outcomes. At a national level, this will in turn assist matching people to jobs to address immediate "shortages" as well as longer-term workforce needs.

However, in practice, there are several limitations with the existing taxonomies:

- None of the existing taxonomies are comprehensive stand-alone categorising frameworks. This is primarily because there is no universal accepted definition and interpretation of "skills", so each taxonomy takes a different approach to defining and categorising skills.

- The taxonomies are incomplete in their coverage of both skills and knowledge and therefore may not be practically useful for all stakeholders. For example, the Discussion Paper acknowledges the Australian Skills Classification (ASC) is being decommissioned because it has several deficiencies including lacking some level of detail.

- Some existing taxonomies are not necessarily widely known by all stakeholders and therefore may not be fully utilised in decision making. For example, the ASC was only established in March 2021 and is less known than, for example, the AQF.

These challenges need to be addressed by Jobs and Skills Australia (JSA) to develop a meaningful and useful NST.

Defining "skills" and "knowledge"

The primary challenge for JSA in developing a NST is that there is no universal accepted definition of skills so that different interpretations already exist amongst stakeholders. What is defined as a skill has many interpretations and the Discussion Paper suggests an intent through the new NST to move towards a common definition of skills. The Go8 recommends that achieving a common and comprehensive definition of skills requires distinguishing knowledge from skills.

Broadly speaking, knowledge refers to information, concepts, theories that people learn through formal and/or informal education, whereas skills are the proficiencies of people to apply knowledge. These skills could include cognitive, technical and communication skills.

The current ASC lacks the distinction between knowledge and skills despite in some cases the "skill clusters" lens of the ASC referring to specialist tasks that involve research as well as in some cases the recently introduced "skills statements" mentioning knowledge.

Knowledge and skills are also not binary indicators but exist on a 'spectrum', so there is a need for a NST to not only include the distinction, but also differentiate under each, the level and extent of knowledge and skills required in different occupations. In this regard, one existing approach to consider and be consistent with, is the AQF qualification type descriptor, which distinguishes between knowledge and skills with clear contextual definitions of each, including a description of the application and level of knowledge and skills for the given qualification.

An NST should encapsulate breadth and depth of coverage and include rich descriptions of defined skills and knowledge without being overly detailed.

Higher education consultation on the NST

The Go8 recommends that both data driven, and consultative approaches are necessary to arrive at common definitions and validation of skills and knowledge.

One acknowledged limitation of the existing ASC is its somewhat lack of application to education contexts. Given employment growth projections suggesting over 50 per cent of jobs by 2050 will require a higher education qualification, a NST must involve input from the higher education sector.[1]

The consultation should include university experts that design and set subject curricula and, if an additional use case of the NST is to streamline recognition of prior learning (RPL) and credit towards qualifications, admissions experts should also be consulted. A NST must incorporate specificity with respect to the type and scope of knowledge associated with a qualification for it to be useful in RPL and credit processes for universities.

Consultation should also include research experts within the Go8 universities, many of whom are at the forefront of research frontiers in their fields. These researchers are often developing and using rapidly emerging and changing technologies, including in relatively new fields such as artificial intelligence and quantum science.

These technologies and fields may involve development and application of new knowledge and skills (or alternatively new competencies; tasks; or attributes), and eventually these flow through to occupations and jobs in the broader workforce. The higher education sector is therefore a source of identifying new knowledge and skills that should be reflected in an NST.

The Go8 is well positioned to assist the JSA with discussions with leading university sector experts as well as broader industry on the educational and economic use cases of a new NST.

What features from existing skills taxonomies are important to retain or address in a new NST?

Each existing taxonomy has different features that should be continued and enhanced through an NST:

- A key strength of the ASC, even though it is being decommissioned, is its initial attempt to begin a common understanding of skills in the Australian context. This initial work needs to be built on with a new NSC by addressing the distinction between knowledge and skills – potentially drawing on the AQF and revising and expanding the skills statements that were recently introduced in the ASC.

- The fairly recent introduction of the skills statement data fields enhanced the ASC in terms of clarity for users and this type of rich information should form a component of a new NST.

- Breadth and coverage are critical. The coverage of the ASC improved over time, and this is a key consideration for the JSA in its development of an NST - whether to publish a taxonomy early without necessarily having full coverage, or only publish once there is full coverage.

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[1] Oxford Economics Australia. (2023). *Tertiary education qualification demand*, Report produced for the Department of Education, December.

- The ANZSCO has a well-established occupational based structure, providing, for example, the ability to do time series analysis of labour market trends. It also allows acquired formal education and training to be mapped to a "skill level" for a given occupation using the AQF so that, for example, university level qualifications are directly captured in the classification and hierarchy. The other useful feature of ANZSCO is that it can to some extent facilitate international comparisons in relation to the International Standard Classification of Occupations (ISCO).

- A comprehensive review of ANZSCO by the ABS is occurring with a new classification due December 2024. As part of this review, it is intended that a unique set of tasks will be defined for each occupation in ANZSCO, which will also be a useful feature because it will provide a more granular assignment of a skill level to each occupation.

- The AQF has the benefit of distinguishing knowledge from skills and describing the level and scope of knowledge and skills that different qualification levels entail. The AQF also has the advantage of also being long-standing, having been introduced in 1995 and agreed between Commonwealth and State/Territory jurisdictions. As a result, it has the additional benefit of widespread adoption, particularly in the education and training sector. The AQF is used in the accreditation and development of qualifications and also in specifying learning outcomes for qualification types.

- Nonetheless, the AQF has been identified as needing reform to better align and raise transparency of tertiary education qualifications; improve recognition of prior learning; and improve recognition of qualifications related to microcredentials.[2]

- The key useful feature of the ASCED is its focus on educational activity (level and field) which can inform definitions and validation of skills. It too has been in place for close to 25 years and was developed with input and support across jurisdictions and levels of government, including education bodies.

Interoperability of a new NST with existing taxonomies will also need to be a feature for it to be useful. This is because notwithstanding the ASC being decommissioned, the other major taxonomies will continue to be operational, already have wider awareness amongst stakeholders, and are to a varying extent already embedded in decision making by some stakeholders.

Given the continuation of existing skills taxonomies, an NST should not attempt to substitute for these taxonomies. It should aim to complement them by, for example, providing greater depth and breadth of coverage, supported by rich skills and knowledge descriptions, and clear mapping to existing taxonomies, particularly the currently being updated ANZSCO and the eventually updated AQF.

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

Two use cases identified in Table 1 of the Discussion Paper where the NST could make a critical difference relate to supporting skills-based hiring and also assisting in dynamically responding to economic shifts and emerging roles.

For these two use cases to be enabled by a new NST, it must be widely disseminated, with information given to stakeholders on how to use it in their decision making. This is particularly the case for employers in supporting skills-based hiring.

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[2] Review of the Australian Qualifications Framework Final Report. (2019). https://www.education.gov.au/higher-education-reviews-and-consultations/resources/review-australian-qualifications-framework-final-report-2019

On skills-based hiring, employers will currently be using either their own frameworks and/or existing taxonomies. Therefore, a NST must not only be comprehensive in its coverage and updated regularly, but it must also be easily interpretable to raise its practical use across the economy. A new NST must spell out knowledge as well as skills for it to be meaningful for hiring employers.

Governance arrangements including updating and maintaining the NST

We recognise the University-Industry Collaboration in Teaching and Learning Review (2021) called on the government to pursue the ASC as an open access national skills taxonomy. As the Discussion Paper recognises, open access should encourage participation but may pose challenges for quality and consistency. Therefore, the Go8 recommends that there should continue to be a role for an agency such as JSA. In addition, there should be direct representation in the governance of an NST from higher education, such as the Go8 Universities.
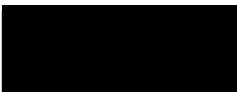
Governance arrangements will need to be cognisant of, and integrate, with the proposed new Australian Tertiary Education Commission (ATEC). This is because at the very least, ATEC's functions are expected to include improving the quality and currency of data across the tertiary education sector, including filling critical data gaps. In addition, ATEC may have a function to produce skills and demand forecasting for Australia, including forecasts of supply/demand mismatches at occupation level, which will intersect with a future NST.

It is obviously important that for the NST to be useful over time, it should be updated and maintained. While the Go8 is not prescriptive about how frequently updates should occur, the process should be embedded in the governance arrangements of the NST. Updates should be done in a way that is transparent and not administratively burdensome on stakeholders that provide input to the NST, including the higher education sector. Resourcing to maintain and update the NST should be fully funded from the Commonwealth Government and not reliant on users/stakeholders.

A data quality framework should form part of the NST governance and, besides more regular updating and maintenance, should include a more comprehensive review of the NST potentially every 3 years. Such a review would draw on the experience of stakeholders, including a diversity of perspectives from the higher education sector. A review should assess whether the NSC has tangibly contributed to enabling its intended use cases that need to be defined from the outset, as well as more broadly the vision to make skill formation more explicit and transparent.

I am happy to further discuss our submission with you and can be contacted by email at chief.executive@go8.edu.au should you wish to discuss.

Yours sincerely

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