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Threshold learning outcomes: a framework for incorporating professional accreditation and AQF standards into assessment blueprinting/mapping in healthcare disciplines

A resource developed as part of the *Harmonising higher education and professional quality assurance processes for the assessment of learning outcomes in health project*

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List of acronyms used

ALTC	Australian Learning and Teaching Council Ltd
AQF	Australian Qualifications Framework
LTAS	Learning and Teaching Academic Standards project
TEQSA	Tertiary Education Quality and Standards Agency

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1 Introduction

In 2010, the Australian Learning and Teaching Council (ALTC) established the Learning and Teaching Academic Standards (LTAS) project (Australian Learning and Teaching Council 2011; Discipline standards in Australia 2013). This project brought discipline communities together to define academic standards in line with the Australian government's new standards-based quality assurance framework.

For the purposes of the LTAS project, academic standards were defined as encompassing discipline-specific knowledge, skills and capabilities. These standards were then expressed as the 'threshold learning outcomes' that a graduate of any given discipline (or program) must have achieved.

Through the LTAS project in healthcare, a set of common threshold learning outcomes was identified around which individual discipline-based learning outcomes could be organised (O'Keefe, Henderson & Pitt 2011). These threshold learning outcomes were derived from existing disciplinary accreditation standards/competencies (standards). The disciplinary standards were then organised under these six overarching learning outcomes.

2 The harmonising project

Grouping the existing professional standards for individual healthcare disciplines into common content domains led to the identification and articulation of the threshold learning outcomes for healthcare. The potential for these threshold learning outcomes to act as a common 'yardstick' by which learning outcomes across disciplines could be defined and aligned was clearly apparent. In addition to a benefit in relation to facilitating cross-disciplinary alignment, the threshold learning outcomes offered the possibility of facilitating greater linkages between the requirements of universities and accreditation bodies for student learning outcomes.

The harmonising project¹ was undertaken to explore these possible linkages further and, in particular, the potential utility of threshold learning outcomes as a unifying framework for reporting the scope and level of student achievement across different qualification levels that is applicable to a range of healthcare disciplines and linked directly with accreditation requirements.

The project's final report is available from the OLT website at <http://www.olt.gov.au/resource-harmonising-higher-education-professional-quality-assurance-assessment-health>

2.1 Assessing learning outcomes in healthcare disciplines

¹*Harmonising higher education and professional quality assurance processes for the assessment of learning outcomes in health*, ALTC Strategic Priority Projects, November 2010.

Consideration of assessment practices in relation to academic standards and professional accreditation expectations should recognise the importance of:

- blueprints/curriculum mapping that clearly articulate the relationship between learning outcomes and assessment strategies
- a combination of multiple assessment modes including direct observation in the clinical setting
- emphasis on criterion-referenced assessments
- authentic, demonstrably valid and reliable assessment methods
- expert assessors who have participated in calibration processes
- clearly articulated and diligently constructed standards for individual or combined assessments

Demonstrating evidence of achievement of learning outcomes in healthcare disciplines is complex because:

- It can be difficult to anchor learning outcome assessment to specific curriculum content without using composite assessment strategies:
 - In some instances multiple individual learning outcomes are assessed concurrently.
 - Some learning outcomes require multiple individual assessments that may build on previous assessment outcomes.
 - Capturing the uniqueness of content in healthcare and the complexity of different levels of achievement requires integrated assessment of knowledge, skills and/or application.

2.2 Threshold learning outcomes as a unifying framework

As a result of the harmonising project, it was demonstrated that the expected learning outcomes of both universities and accreditation councils could be integrated into a single framework based on the threshold learning outcomes. Further, this framework could then be used for the purpose of simultaneously demonstrating compliance with accreditation, registration and higher education requirements.

2.3 Demonstrating achievement of learning outcomes at different AQF levels

As part of the Higher Education Qualification Standards, higher education providers are required to demonstrate achievement by students of specific learning outcomes that are at the appropriate Australian Qualifications Framework (AQF) level for the qualification being offered (Australian Government Department of Industry, Innovation, Science and Tertiary Education 2009; Australian Government Higher Education Standards 2013; Australian Government Tertiary Education Quality and Standards Agency 2012; Australian Qualifications Framework 2013).

There is great potential benefit to universities in streamlining reporting requirements to the Tertiary Education Quality and Standards Agency (TEQSA) across multiple disciplines. Throughout the harmonising project activities, academic staff also indicated a preference for reporting evidence of learning outcome achievement against aggregated outcomes such as the threshold learning outcomes rather than as individual accreditation standards/competencies.

The framework developed through the harmonising project and based on the threshold learning outcomes provides the mechanism for achieving these outcomes.

3 Threshold learning outcomes: a framework for incorporating professional accreditation and AQF standards into assessment blueprinting/mapping in healthcare disciplines

The framework is based on the six threshold learning outcomes in health.

Upon completion of their program of study, healthcare graduates at professional entry-level (as defined by each individual discipline) will be able to:

- demonstrate professional behaviours
- assess individual and/or population health status and, when necessary, formulate, implement and monitor management plans in consultation with patients/clients/carers/animal owners/communities
- promote and optimise the health and welfare of individuals and/or populations
- retrieve, critically evaluate and apply evidence in the performance of health-related activities
- deliver safe and effective collaborative healthcare
- reflect on current skills, knowledge and attitudes, and plan ongoing personal and professional development.

Table 1 demonstrates the format of the framework. Reporting achievement of learning outcomes is undertaken under the same six threshold learning outcomes for each discipline. Under each threshold learning outcome on the Y-axis is listed the relevant accreditation standards/competencies that are grouped within this threshold learning outcome (O’Keefe, Henderson & Pitt 2011). Across the X-axis, the various assessment tasks that assess one or more of accreditation standards across the curriculum are listed. Each cell is then allocated an AQF level to denote the highest level of student achievement in relation to each assessment task expressed as an AQF equivalent level (as per the AQF descriptors). It is then possible to demonstrate with relative ease the highest level of student achievement relative to the AQF across the entire threshold learning outcome. The nature of the evidence of achievement is also clearly recorded, together with the timing and method of assessment.

Tables 2–6 provide an illustration of the framework ‘in action’ in relation to the threshold learning outcome ‘Retrieve, critically evaluate, and apply evidence in the performance of health-related activities’ across the five disciplines participating in the harmonising project.

Table 1. Format of threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category

Threshold learning outcome	AQF level ⁴				
	Assessment tasks				
Discipline accreditation standard	Task a	Task b	Task c	Task d	Task e
1	9 ²	7 ¹	7	9	9
2	7	LONA ³	7	9	9
3	7	7	7	LONA	9
4	9	9	7	9	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome

Table 2. Example threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category: dentistry

Threshold learning outcome Retrieve, critically evaluate, and apply evidence in the performance of health-related activities	AQF level ⁴			
	Assessment tasks			
Discipline accreditation standard	Literature review	SAQ	Research project	Clinical case study
Practice evidence-based dentistry	9 ²	7 ¹	LONA ³	9
Evaluate and integrate emerging trends in healthcare as appropriate	7	7	9	9
Formulate treatment plans that integrate research outcomes with clinical expertise and patient views	LONA	9	LONA	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome: Retrieve, critically evaluate, and apply evidence in the performance of health-related activities (O’Keefe, Henderson & Pitt 2011)

Table 3. Example threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category: medicine

Threshold learning outcome Retrieve, critically evaluate, and apply evidence in the performance of health-related activities	AQF level ⁴			
	Assessment tasks			
Discipline accreditation standard	Literature review	SAQ	Research project	Clinical case study
Have knowledge and understanding of the scientific method relevant to biological, behavioural and social sciences at a level adequate to provide a rational basis for present medical practice, and to acquire and incorporate the advances in knowledge that will occur over own working life	7 ¹	7	9 ²	9
Interpret medical evidence in a critical and scientific manner and understand of the epidemiology of disease in differing populations and geographic locations	9	9	9	9
Use information technology appropriately as an essential resource for modern medical practice	LONA ³	LONA	9	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome: Retrieve, critically evaluate, and apply evidence in the performance of health-related activities (O’Keefe, Henderson & Pitt 2011)

Table 4. Example threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category: midwifery

Threshold learning outcome Retrieve, critically evaluate, and apply evidence in the performance of health-related activities	AQF level ⁴			
	Assessment tasks			
Discipline accreditation standard	Literature review	SAQ	Research project	Clinical case study
Ensure research evidence is incorporated into practice	7 ¹	7	LONA ³	9 ²
Interpret evidence as a basis to inform practice and decision making	9	7	9	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome: Retrieve, critically evaluate, and apply evidence in the performance of health-related activities (O’Keefe, Henderson & Pitt 2011)

Table 5. Example threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category: nursing

Threshold learning outcome Retrieve, critically evaluate, and apply evidence in the performance of health-related activities	AQF level ⁴			
	Assessment tasks			
Discipline accreditation standard	Literature review	SAQ	Research project	Clinical case study
Demonstrate analytical skills in accessing and evaluating health information and research evidence	9 ²	7 ¹	9	9
Use a relevant evidence-based assessment framework to collect data about the physical sociocultural and mental health of the individual/group	LONA ³	7	LONA	9
Use best available evidence, nursing expertise and respect for the values and beliefs of individuals/groups in the provision of nursing care	LONA	9	LONA	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome: Retrieve, critically evaluate, and apply evidence in the performance of health-related activities (O’Keefe, Henderson & Pitt 2011)

Table 6. Example threshold learning outcomes framework demonstrating learning outcome assessment level (in relation to the AQF learning outcomes) for each accreditation standard within a single threshold learning outcome category: physiotherapy

Threshold learning outcome Retrieve, critically evaluate, and apply evidence in the performance of health-related activities	AQF level ⁴			
	Assessment tasks			
Discipline accreditation standard	Literature review	SAQ	Research project	Clinical case study
Acquire and apply new knowledge to improve own practice continuously	7 ¹	7	7	9 ²
Apply an evidence-based approach to own practice	LONA ³	7	LONA	9
Apply contemporary forms of information management to relevant areas of practice	LONA	7	7	9

¹Learning outcomes assessed at AQF level 7 ‘broad and coherent knowledge and skills for professional work and/or further learning’ (Australian Qualifications Framework 2013)

²Learning outcomes assessed at AQF level 9 ‘specialised knowledge and skills for research, and/or professional practice and/or further learning’ (Australian Qualifications Framework 2013)

³Learning outcome not assessed

⁴The framework provides evidence of achievement of learning outcomes at AQF level 9 from aggregated outcomes across the selected threshold learning outcome: Retrieve, critically evaluate, and apply evidence in the performance of health-related activities (O’Keefe, Henderson & Pitt 2011)

Important note

These are examples that are illustrations only and they do not reflect the curriculum or assessment program at any institution or discipline.

In addition, they do not necessarily reflect current accreditation standards/competencies for the participating disciplines. For accurate information on current accreditation standards, readers should refer to the relevant accreditation council website.

The AQF levels selected are for illustration purposes only and are not to be interpreted as attributing any particular AQF level to any particular assessment approach. Most assessment tools can be used to assess student learning outcomes at different levels of student achievement (e.g. at level 7 or at level 9), depending on the choice of assessment tasks and required performance level.

4 Frequently asked questions

1. What are the threshold learning outcomes in health?

The threshold learning outcomes in health are a set of six statements describing the expected knowledge, skills and capabilities expected of entry-level professional healthcare graduates. These statements were derived from the professional accreditation standards/competencies (standards) of 26 different healthcare disciplines as part of the LTAS project (O'Keefe, Henderson & Pitt 2011). They represent a common set of 'high level' learning outcomes for healthcare graduates. Within individual disciplines, each of the relevant professional accreditation requirements can be mapped to one of the threshold learning outcomes. The threshold learning outcomes provide a unifying framework for the organisation of professional accreditation standards across healthcare disciplines. The threshold learning outcomes for health are listed on page 8.

2. What is the AQF?

'The Australian Qualifications Framework (AQF) is the national policy for regulated qualifications in Australian education and training. It incorporates the qualifications from each education and training sector into a single comprehensive national qualifications framework' (AQF website, 'About the AQF', viewed 22 February 2013). Further information is available at <<http://aqf.edu.au/>>.

3. What is the relationship between the threshold learning outcomes and accreditation standards?

The threshold learning outcomes were derived from the accreditation standards/competencies of individual healthcare disciplines that were current at the time of the LTAS project (2010). At that time, the entire set of accreditation standards for 26 individual healthcare disciplines were mapped onto one of the six threshold learning outcomes (O'Keefe, Henderson & Pitt 2011).

4. What is the relationship between TEQSA and accreditation councils?

TEQSA is a regulatory body that assesses compliance by universities with threshold provider and qualification standards. This includes a requirement 'that all higher education awards at Levels 5–10 of the Australian Qualifications Framework (AQF) must meet the corresponding specifications in the AQF.' (TEQSA website, 'TEQSA and the Australian Qualifications Framework', viewed 22 February 2013). Further information is available at <<http://www.teqsa.gov.au/for-providers/frequently-asked-questions-providers>>.

Accreditation councils currently monitor content and delivery of healthcare degrees to ensure professional practice standards are met.

5. How can universities most effectively and efficiently provide information that meets the requirements of both accreditation councils and TEQSA?

The harmonising project framework offers universities a mechanism to maintain a common data set to allow ease of information sharing and management to meet the requirements of both TEQSA and accreditation councils. The use of the framework shown here should assist universities to provide information effectively and efficiently that meets the requirements of TEQSA and accreditation councils

6. How can this framework be used to inform quality improvement/curriculum development activities?

The harmonising project framework provides:

- a single point of documentation and record keeping from which congruent information can be accessed for accreditation and TEQSA
- a visible/transparent examination of the curricula that exposes strengths and weaknesses, thereby directly informing curricula renewal
- a coherent and sustainable process that can be readily shared across healthcare disciplines.

The process of identifying and matching the goals and expectations of TEQSA and accreditation councils through use of the framework can also highlight any gaps or mismatches related to teaching, learning and/or assessment in such a complex context.

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