A Guide to KSB-aligned Learning Outcomes

QAA GATSBY Elizabeth Cleaver Consulting Limited

Contents

** All weblinks and web-images checked and correct at time of writing (May 2026).*

About this Toolkit

The Toolkit provides a lens through which to scrutinise and adapt existing academic governance and quality management processes to create Level 4 and Level 5 programmes of study that are HTQ-ready. By HTQ-ready, we mean that qualifications are ready for submission to the Department for Education (DfE) for approval as Higher Technical Qualifications (HTQs), and to navigate this external approvals process as smoothly as possible.

Importantly, the Toolkit is not intended to replace or duplicate established quality management processes. However, in recognition of the unique positioning of HTQs as classroom-based, occupational-standard aligned and employer-endorsed qualifications, it is important that programmes are as fully prepared as possible before entering the DfE approval process.

The aim is to minimise the need for changes to programmes and modules that have already been validated, and to avoid unnecessary delays in the approval process. As a qualification cannot be marketed as an HTQ until full DfE approval has been granted, any such delays may have consequences for student recruitment and programme delivery.

The Toolkit was developed by Elizabeth Cleaver Consulting Limited in partnership with an expert practitioner group comprising representatives from De Montfort University, New College Durham, Newcastle College University Centre, Northumbria University, Nottingham Trent University, Sheffield Hallam University, Teesside University, the University of Manchester, the University of Portsmouth and the University of Salford.

The resources were developed in response to feedback from awarding organisations involved in the pre-2025 HTQ approval process, as highlighted in Gatsby's 2025 report, *The Higher Technical Qualifications (HTQ) Approval Process in England: A Review*.

The project was commissioned by the Gatsby Foundation and supported by the Quality Assurance Agency (QAA). Users are advised to consult the most recent guidance from the DFE on the HTQ approval process before using these resources.

Purpose of this document

This guidance document has been developed as one of a suite of resources designed to support degree awarding bodies in England to prepare to submit validated Level 4 or 5 qualifications for external approval and recognition by the Department for Education (DfE) as Higher Technical Qualifications (HTQs).

Two types of 'learning outcomes' are relevant and important for HTQ programmes:

- First, the **programme and module learning outcomes** which are the normal validation mechanism for outlining and identifying the parameters and expectations of a student learning and student success on a given programme.
- In addition, the relevant **Knowledge, Skills and Behaviours** (KSBs) of an HTQ Occupational Standard which outline in detail what a student should be able to know and do by the end of their programme of study, to be ready for occupational entry.

With both types of outcome a key element of successful HTQ design, the principle underpinning this guidance is simple: the closer and clearer the alignment of programme and module learning outcomes to the required knowledge, skills and behaviours (KSBs) of the occupational standard, the closer the programme will be to meeting both awarding body validation criteria and DfE HTQ approvals criteria.

It should also be noted, that other information contained in the wider programme and module specifications submitted, including indicative content sections, will be taken into account during the DfE HTQ approvals process.

Many awarding bodies have existing guidance and, in some cases, rules for writing programme and module learning outcomes. The guidance below is therefore not intended to supersede this, but to offer enhancement ideas to support programmes to become as HTQ-ready as possible.

The example learning outcomes are designed to support awarding bodies to address any gaps highlighted by the HTQ Readiness Prompts exercise, and in particular the following questions from Section C (the Validation Process):

C5: Intended Learning Outcomes

a. Are programme teams provided with support and guidance to design KSB-ready programme and module learning outcomes?
b. Do programme specification documents require the completion of a module map - showing the relationship between programme and module learning outcomes and KSB-alignment?

KSB Aligned Learning Outcomes

HTQ occupations standards will have significantly more KSBs than the number of learning outcomes that are required by programme and module specifications. It is therefore anticipated that you will either map a number of related KSBs to each learning outcome and/or purposefully combine a group of KSBs into a related composite learning outcome.

These two approaches to creating KSB aligned learning outcomes are not incompatible and may be undertaken together. Your choice of primary approach may depend on your starting point - for example, whether you are adapting an existing programme and modules or creating something from scratch - for HTQ approval.

Mapping

Many awarding body programme specification forms, particularly those associated with apprenticeship programmes, now include a mapping template on which the KSBs from a relevant occupational standard can be listed and directly mapped to modules and their learning outcomes.

This is a useful way of creating a whole programme overview to indicate where each KSB is covered in the programme of study, and to ensure that KSBs are not unnecessarily duplicated or overly bunched at any one level or in any one module.

It is particularly useful initial exercise when existing modules and programmes are being assessed for HTQ-readiness. The mapping exercise will highlight current alignment, any overlaps or gaps, and prompt consideration of how and where learning outcomes can adapt or change to accommodate KSBs more evenly and explicitly.

It also forms a useful secondary or parallel exercise for those creating new HTQ modules and programmes to do a whole-programme check for alignment, overlap and gaps. And of course, it is likely to be something you have to do for your validation paperwork and event.

Integration

The ideas and worked examples presented in this section can be used to support the 'integration' of KSBs into new modules and/or programmes as they are written and developed. In addition, programme teams who have mapped existing programmes (see above) may find them helpful for the adaption of existing modules and learning outcomes to better reflect the language and expectations of KSBs.

As noted above, although learning outcomes are not the sole indicator of success in the DfE HTQ approvals process, aligning them closely with the occupational standard can be beneficial. Such alignment helps both external assessors (human and AI) and students to better understand the programme's HTQ credentials.

Step 1: Identify related KSBs

Identify clusters of KSBs that logically fit together (for example, those related to themes such as project management, stakeholder interaction, or product development). One possibility is to use work already undertaken and written into the occupational standard (see worked example 1 below). However you may decide that your programme and its outcomes is better served by creating bespoke KSB groupings (see worked example 2). The reality is that you may use a combination of these two approaches.

Step 2: Define the module learning outcome

Create a single outcome that captures the essence of the grouped KSBs without losing clarity. The normal rules for creating good learning outcomes apply here. Use active verbs that students will enact and that can be assessed e.g. *analyse, apply, solve, demonstrate or create*, and avoid vague terminology that is hard to assess i.e. *be aware of, appreciate or be familiar with*. Remember also to stick with level-appropriate language, as outlined in your institution's grading descriptors, the QAA Frameworks for Higher Education Qualifications of Degree Awarding Bodies[1] and the SEEC Credit Level Descriptors.[2]

Step 3: Check for assessibility

Ensure the outcome can be directly assessed through practical or simulated methods and associated assessment criteria. As assessment criteria are one step further away from the KSBs, it is worth a double check: will the assessment directly evidence that the mapped KSBs have been met?

1 https://www.qaa.ac.uk/docs/qaa/quality-code/the-frameworks-for-higher-education-qualifications-of-uk-degree-awarding-bodies-2024.pdf?sfvrsn=3562b281_11
2 https://cradall.org/sites/default/files/seec-credit-level-descriptors-2021.pdf

Worked Example 1: Building on existing occupational duty groupings.

The following worked example uses the Early Years Practitioner Level 5 Occupational Standard (Reference: OCC0551).[3] The occupational standard contains detail of 22 knowledge, 27 skill and 6 behavioural requirements associated with entering a job in this field. Here the worked example builds on Occupational Duty 15 to create a classroom-relevant and assessable outcome:

Duty 15: *Work in collaborative partnership with parents and carers in the planning, implementation and review of strategies in place to support children's experience, holistic development, learning and progress.*

Duty 15 as a Level 5 Learning Outcome: *On successful completion of this module, you will have demonstrated a critical understanding of the role of collaborative working in planning, implementing and reviewing strategies to support children's development, learning and progress.*

Mapped KSBs: The occupational standard connects Duty 15 to 29 (of the total 55) KSBs. These can be accessed by clicking the 'Related Knowledge, Skills and behaviours' dropdown arrow on the occupational standard webpage (see footnote 4). It is important to note that these KSBs are not distinct to this Duty and a number are repeated in relation to other duties. As such, you may develop other module learning outcomes (at either Level 4 or 5) that already cover a number of the KSBs.

In deciding which KSBs to map to this particular learning outcome, it is important to look holistically at the programme and its modules, identify any points of repetition, and consider where the each KSB is best placed. At this point, joining this process up with the mapping exercise described above is likely to be beneficial.

It is also worth noting that this occupational standard operates at both Levels 4 and 5. A limited number of KSBs may therefore need to be mapped at both levels to build and showcase learner progression, using a spiral curriculum approach.[4]

3 https://occupational-maps.skillsengland.education.gov.uk/maps/occupation/OCC0551
4 See https://isu.pressbooks.pub/thuff/chapter/jerome-bruner-kim-tomkinson/ for further information.

With this in mind, this example assumes that a significant number of the Duty 15 Related KSBs will be mapped to other modules. The following 9 KSBs have therefore been identified as aligning directly to this Level 5 module learning outcome:

- **K8:** The importance of the social cultural context on the learning and development of the child and the influence parents, families and carers have within the home learning environment and the complexities of the family situation.
- **K9:** Potential effects of transitions and theories and approaches on how to successfully support children and their families.
- **K10:** Strategies to effect collaborative approaches to working with parents, carers, colleagues, professional bodies and multi agencies. (K10)
- **S6:** Promote, model and support children and families to develop a healthy approach to making choices relating to personal care including eating, sleeping and physical activity.
- **S7:** Analyse and articulate how all children's individual learning can be affected by their current developmental capabilities, characteristics and individual circumstances taking into account all factors contributing to typical and atypical development.
- **S14:** Cultivate professional partnerships with parents, carers, colleagues and other professionals, presenting their understanding of the child's journey within multidisciplinary teams to holistically support the child's individual needs.
- **S15:** Demonstrate the importance of the home learning environment, developing an effective and collaborative partnership to enhance opportunities for the child. (S15)
- **S20:** Take responsibility for supporting the key person in articulating children's progress and planning future learning possibilities including the safe use of digital technology to communicate effectively in both oral and written English.
- **B1:** Ethical, fair, consistent and impartial, valuing equality and diversity at all times within professional boundaries.

Worked Example 2: Learning outcomes from bespoke KSB groupings

The following worked example uses the Cyber Security Technologist – Cyber Defend and Respond (2021) Level 4 Occupational Standard (OCC1021A).5 The occupational standard contains detail of 17 knowledge, 19 skill and 10 behavioural requirements associated with entering a job in this field.

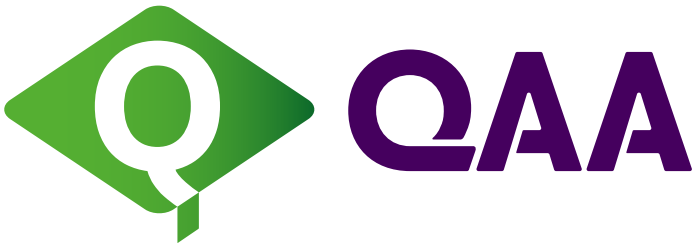
Example Learning Outcome at Level 4: On successful completion of this module, you will have demonstrated the ability to identify and investigate a real-world cyber-security threat or hazard and recommend a secure, compliant and sustainable defence solution.

There are a number of KSBs that together align to and build this learning outcome. In deciding which KSBs to include in the final mapping, it is important to look holistically, identify any points of repetition (in other modules) and consider which modules are best placed to build and assess each KSB. The table below provides examples of potential 'grouped' KSBs.

5 https://occupational-maps.skillsengland.education.gov.uk/maps/occupation/OCC1021A

Learning outcome component	Aligned KSBs
Identify and investigate a real-world cyber-security threat or hazard	**K2:** the concepts, main functions and features of at least three Operating Systems (OS) and their security functions and associated security features. **K4:** the main types of common attack techniques; also the role of human behaviour, including the significance of the 'insider threat'. Including: how attack techniques combine with motive and opportunity to become a threat. Techniques and strategies to defend against attack techniques and mitigate hazards. **K7:** cyber incident response processes, incident management processes and evidence collection/ preservation requirements to support incident investigation. **S1:** Discover vulnerabilities in a system by using a mix of research and practical exploration. **S2:** Analyse and evaluate security threats and hazards to a system or service or processes. Use relevant external source of threat intelligence or advice (e.g. National Cyber Security Centre) Combine different sources to create an enriched view of cyber threats and hazards. **S5:** Source and analyse security cases and describe what threats, vulnerability or risks are mitigated and identify any residual areas of concern.

Recommend a secure, compliant and sustainable defence solution	**S3:** Research and investigate common attack techniques and relate these to normal and observed digital system behaviour and recommend how to defend against them. Interpret and demonstrate use of external source of vulnerabilities (e.g. OWASP, intelligence sharing initiatives, open source). **S7:** Identify and follow organisational policies and standards for information and cyber security and operate according to service level agreements or other defined performance targets. **S9:** Recommend improvements to the cyber security posture of an employer or customer based on research into future potential cyber threats and considering threat trends. **B2:** Analytical - working with data effectively to see patterns, trends and draw meaningful conclusions. **B10:** Problem Solving - Identifies issues quickly, solves complex problems and applies appropriate solutions. Dedicated to finding the true root cause of any problem and find solutions that prevent recurrence.



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