A STEP-BY-STEP GUIDE TO DESIGNING MORE AUTHENTIC ASSESSMENTS

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> If we want to inspire student learning, authentic assessment is one of the most practical tools we have in our teaching toolbox.

INTRODUCTION

This guide acts as a companion to **Watt Works Quick Guide 22** which suggested one practical approach you could take to designing more authentic assessments to promote learning. Here we unpack that approach in more detail in ways that we hope will help hard-pressed Heriot-Watt colleagues to design more authentic assignments in a systematic and effective way.

AUTHENTIC ASSESSMENT AS A MEANS OF ENHANCING STUDENT LEARNING

An 'authentic assessment' is an assessment task that is designed to have value and meaning to students beyond merely the mark achieved. Authentic assessment is a concept – promoted by Wiggins (1989) among others – whereby students are engaged in **using** and **applying** skills and knowledge to address either 'real world' problems (Lund, 1997) or **plausible situations**, giving the task a sense of authenticity. The aim is to involve more than simply being able to recall answers or respond formulaically to set questions, as might be the case with a traditional testing format (Ramsden, 2003).

Authentic assessment tasks provide a **meaningful context** that makes connections between students' lives and their university-based learning experiences. The concept of authenticity is, however, 'a relative one and can be seen as faithfulness to the discipline or subject area' (Sambell et al, 2013 p12), or can be linked to students' personal interests or issues they have identified for themselves (Davison, 2011).

Authentic assessment thus encourages students to view assessment activities as inherently meaningful, interesting, relevant and having long-term value. Our own early research (Sambell et al, 1997) on the impact of alternative assessment indicated that if students felt their assessment tasks were intrinsically useful and worthwhile (for example, they required them to communicate, discuss, defend their ideas, or produce something that felt meaningful to them beyond simply acquiring marks or grades), then they were more likely to invest effort in deep, genuine, lasting learning, rather than going through the motions, or submitting whatever they thought their lecturers wanted to hear or see. In this way the assessment tasks we set can send strong **backwash** messages about the kind of deep, complex, high-order learning we value in higher education, which includes meaning-making, criticality and connectivity, thus potentially changing the very ways in which learners see and interact with their worlds (Ashwin, 2020).

More authentic, learning-oriented assessments can thus have a powerful positive backwash effect on students' approaches to learning and the way they view themselves and approach their studies (Sambell et al, 2013).

AUTHENTICITY MEANS MORE THAN JUST EMPLOYABILITY

One characteristic of authentic assessment is fidelity (Ashford Rowe et al, 2014) or realism (Villaroel et al, 2018), but this frequently leads people to simply conflate 'realism' with the world of work (McArthur, 2021). While in some disciplinary contexts, fidelity to work-based professional practice and the demands of specific employment may inevitably be extremely important (Gulikers et al, 2004), and can generically equip students for the complexities of graduate-level professional practice which is often a broad goal of higher education (Villaroel et al, 2018), this is not the whole story (McDowell et al, 2009; Davison, 2011). Authentic assessments require students to apply knowledge or skills to novel situations, or to integrate, use or synthesise knowledge creatively, as opposed to slavishly answering a question by using a 'recipe' (Ashford Rowe et al, 2014). Authentic assessment's complex, thought-provoking characteristics thus act as catalysts for deep rather than surface approaches to learning (Ramsden, 2003). Moreover, in addition to fostering deep learning:

> *"assessment can be a powerful force in shaping individual students' identity and sense of self-worth….it's about who they are and who they go on to be in our society"*
>
> **(McArthur, 2021)**

So suitably reframed, more authentic, learning-oriented assessments can also be a powerful force in fostering, among other things, a student's personal growth, development, sense of *belonging and becoming* in disciplinary communities, as well as identity, confidence and self-worth (Arnold, 2021; Brown, 2019). More authentic tasks can also play a key role in developing students not only as individuals but also as **active and fulfilled citizens** by, for instance, fostering criticality, divergent thinking, agency, motivation to question commonly held assumptions, creativity, and a sense of pride and value in deeply engaging with complex knowledge, or potential contributions to the broader social good (McArthur, 2021).

They might also activate or nurture learners' sense of university scholarship as community-based engagement (Renwick et al, 2020) whereby students see themselves becoming part of communities' '**mosaic of talent**.' Hence from our viewpoint, authenticity is a much broader-ranging idea than just employability, which implies that assignment designers should think about how far an assessment task encourages the student to see and care about their engagement in assessment and associated learning, not only at the time of their 'assessment performance' but, crucially, in the run up to it.

Hence, in this guide we urge you to step back from the popular assumption that authentic assessment is only about professional or employment-related relevance (important as that may be) and to focus emphatically, too, on the ways in which assessment might become 'relevant, worthwhile and offer students some level of control' (Brown, 2019) in much broader ways.

TAKING A STEP-BY-STEP APPROACH TO DESIGNING MORE AUTHENTIC ASSESSMENTS

As we describe in **Watt Works Quick Guide 22**, whenever writing assignments, it's a good idea to start with the **learning outcomes**, (see Chapter 3 in Brown, 2014) and if they are well written, they are likely to contain one or more powerful, driving **verbs** at their centre to direct student effort. Combined with the **object** of the verb, the appropriate **outcomes/evidence of achievement**, detail about a relevant **context**, and **modifiers** to help students understand the scale and scope of what is required, you can create engaging, well-rounded assessments aligned to learning outcomes.

These six steps are described in more detail in **Watt Works Guide 22**. This guide is designed to help you work through each of them in time-efficient ways: we propose that, for example, new, maybe more current scenarios can be readily created in subsequent years, with the tasks linking to learning outcomes remaining much the same, or new relevant tasks can be added to pre-created scenarios. In this way, assessments that are fit-for-purpose can be built into programmes without having to work from scratch each year.

STEP 1: Learning outcomes matter

Good curriculum design is based on sound and meaningful learning outcomes that clearly demonstrate what students should be able to know, do and be at the end of a course or programme of learning. They provide a transparent frame of reference for students, staff, employers and other stakeholders. They enable 'constructive alignment' (Biggs and Tang, 2011) with assignments so that it's clear what kinds of activities and capabilities will be developed and assessed. Designing authentic assignments becomes straightforward when the verbs contained within learning outcomes can be translated into a set of related and integrated tasks. In addition, sound and useful learning outcomes are a requirement for quality assurance processes for periodic review, accreditation and reaccreditation and validation for national quality bodies and Professional, Subject and Regulatory Bodies.

What's wrong with many current learning outcomes?

Learning outcomes in the past were often hurriedly constructed to match templates, aiming to be Specific, Measurable, Attainable, Realistic and Timely (Williams, 2012), which is fine as far as it goes, but not sufficient to really integrate learning opportunities. Instead, we need to move away from formulaic ways of writing learning outcomes to make them the lifeblood

of learning, and for this the name VASCULAR learning outcome has been coined (Race, 2020 pp31-2). We want them to be:

- **Verifiable:** Can we tell when they've been achieved? And can students?

- **Action-orientated: Do they lead to real and useful activity?**

- **Singular:** i.e. not portmanteau outcomes combining two or more goals into one, making it difficult to assess if differently achieved, but readily matchable to student work produced.

- **Constructively aligned:** (Biggs and Tang, 2011) so that there is clear alignment between the three sides of the triangle: aims (what students need to be able to know and do), what is taught/learned, and how students are assessed and evaluated.

- **Understandable:** i.e. using language that is meaningful to all stakeholders.

- **Level-appropriate:** Suitable and differentiable between 1st year, 2nd year, 3rd year, Masters, other PG? (for example, see the **Scottish Qualifications Framework Level Descriptors**)

- **Affective-inclusive:** i.e. not just covering actions but capabilities in the affective domain.

- **Regularly reviewed:** Not just frozen at a particular point in time and always fit-for-purpose

When doing a course or programme 'spring clean' (such as the one described in **Watt Works Quick Guide 32**, it's a good idea to see if your learning outcomes need refurbishing, to ensure that they really direct students' activities towards learning, and at the same time make it easier for us to design sensible and attainable assessment tasks and activities.

STEP 2: Turning the verbs from the learning outcomes into active assessment tasks

Too often the verbs used in learning outcomes are vague and open-ended e.g. 'understand', 'recognise' and 'appreciate'. Instead, we need the verbs to be lively, powerful and energizing, clearly pointing the students towards action. Over the years, many have relied on Bloom's 1956 taxonomy to supply a systematic hierarchy of progressively more difficult verbs (often visualized potentially misleadingly as a staircase) to use in learning outcomes. There are many modern visualizations that can be found by Googling 'Bloom's Verbs' which can be handy for course designers, so long as too much faith is not invested on believing that these form a strict hierarchy. It can be quite helpful to explore these resources from which to select appropriate verbs that fit your learning requirements. Alternatively, we have published in our **Covid-19 Assessment and Collection** two compendia of authentic assessment examples (published on 14 March 2021 and 3 May 2021) drawn from excellent teachers globally. Here are the kinds of verbs colleagues are using that Heriot-Watt staff might wish to use also, having reviewed examples in practice:

Research	Prepare	Outline	Provide	Draft
Evaluate	Present	Demonstrate	Illustrate	Develop
identify	Prioritise	Select	Investigate	Reflect

STEP 3: Identifying the object of the verb

Here you need to clarify what the verbs you've chosen apply to. What is it that you want students to, for example, 'research', 'prepare', 'present,' 'illustrate' or 'prioritise? You could, for example,

- Research data relating to planning applications.
- Prepare notes in preparation for a meeting.
- Illustrate findings of your lab research.
- Identify action to be taken to remediate the issue.
- Prioritise your key findings using a variety of visual media.

Students given this information are thereby guided as to how they can work on these activities productively in preparation for Stage 5 (Producing outcomes and evidence of achievement).

STEP 4: The subject or professional context

Next, students need to know more about the context in which they are working. At this point you need to provide clarification through scenarios or other means which create a plausible hypothetical context given your subject area or professional area. In some cases, this might be your starting point for the whole set of related and integrated tasks, but there is logic in thinking instead about what you actually want students to do before you design the contextualising background information, which is the means of bringing the assignment to life in order to spark a student's sense of the assessment's relevance and their meaningful engagement with it.

For many this is the most interesting part of designing the assignment where you can design plausible contexts or scenarios on which to base your tasks. The backgrounds for these can come from a variety of sources including relevant newspaper stories, data bases, professional environments, work environments, and so on, as can be illustrated clearly in the examples provided in the compendia in our **Covid-19 Assessment and Collection** which we encourage you to review. Crucially such background helps students to think about how, beyond university, they can make the best use of their learning at university.

Many people really enjoy this creative part of writing the assignment, but if you don't, it helps to work with someone else contributing ideas (who doesn't necessarily have to be a fellow academic or learning supporter!). You can write scenarios or create contexts as demonstrated in our compendia examples, based on, for example:

- **Real Life events,** for example, a police raid or a news story based in the Australian outback;
- **Adopting a role,** for example, as company surveyor for an energy company, or an experienced practitioner mentoring a junior colleague;
- **Professional contexts,** for example, health and social care workers preparing health interventions in a care home during the pandemic;
- **Unfolding incidents,** for example, a building site which is flooded and then has a landslide;
- **Research-paper based assignments** for example asking students to read two articles about contamination and then undertaking tasks related to these.

The scope is almost limitless! Many colleagues devise scenarios based on their own professional, community or voluntary experiences beyond academia, sometimes teams involve alumni in helping produce them, and from time-to-time current events (like the pandemic) provide fertile ground for scenario creation. It helps if you keep them fairly simple and short, without too much extraneous detail, but with just enough to pique your students' interest so they become engaged in the tasks).

STEP 5: Outcomes and evidence of achievement

At this point, assignment designers need to decide what kinds of evidence will demonstrate that students have achieved the learning outcomes. For students to complete these activities, they will need to demonstrate that they recognise the importance of producing outputs for different audiences and also are able to use appropriate registers of communication, from the formal to informal. For many students who have mainly encountered essays and time-constrained exams, such innovative methods of assessment may seem novel and perhaps disconcertingly unfamiliar at first, so it is important to give students formative feedback prior to submission (see Watt Works Quick Guides **3: Giving formative feedback prior to submitting summative tasks** and **8: Helping students appreciate what's expected of them in assessment**) and ideally show them some exemplars of the kinds of products they are seeking to produce. (Watt Works Quick Guide **9: Using exemplars to enhance learning and support achievement**).

This may come across initially to colleagues as 'messy' and potentially disconcerting, since all responses tend to look rather different from one another, unlike exam scripts which tend to have a monotonous similarity. You may need, however, to plan carefully in advance for marking and moderation as this may at first take a little longer. Experience shows that markers find it much more interesting and fulfilling though.

Here we unpack some of the different kinds of activities you could ask students to do within their authentic assignments:

1. It's often useful to include **research and information management** fairly early in programmes so we can be confident that students have the skills necessary to take them through their courses. These might include:
   - Preparing a list of references (including at least two journal articles or book chapters, at least two websites containing digital stories and at least three informal sources such as leaflets, posters or blogs to provide an evidence base from which you can draw information);
   - Explaining what search methods you used and how you selected these particular two from the many out there (100 words).
   - Reviewing one or more articles specified by the teacher with specific tasks associated with this, including perhaps providing a brief summary or explaining the core points to a colleague.

2. **Dissemination tasks** based on students' ways of sharing the outputs of their research might include:
   - Produce an illustrated PowerPoint presentation (no more than 20 slides, the last of which should be your refences and sources in an appropriate format) that you would use to run a 30-minute training event with your colleagues.
   - Draft an advice leaflet for lay people explaining the implications of your research for health and well-being.
   - Work with peers on the VLE to contribute collectively to a group digital mural of images and text depicting your identified priorities.

- Present in the form of a table what you think are the principal benefits of the initiatives you are proposing, and any problems or pitfalls you could envisage in implementing each of these.
- Produce a digital Learning Pack for use by the public which contains a selection of visually attractive attributed or copyright free photos (including perhaps your own) with key information pages, including, for example, suggestions for further reading, articles from the press and media and other relevant resources together with notes which clearly and concisely outline your view.
- Using the data pack provided, format descriptive statistics in Excel to present to the rest of your team in a briefing meeting on Microsoft Teams
- Produce a public information poster, for use in GP surgeries, outlining the benefits of avoiding over-processed foods.

3. Activities demonstrating students' **professional behaviour** could include:
- Draft your notes for a f2f/zoom conversation with a client. Prepare your advice in the form of bullet points in accessible language to which you can refer in your conversation.
- In preparation for your research project, obtain the Ethical Clearance forms necessary for you to undertake this work. Having discussed this with your mentor, complete the forms for feedback from your supervisor prior to submission to the Ethics Committee.
- Research professional development opportunities available for your context and suggest two elements of additional training needs you might have to support your work.

> **An example of an authentic assignment demonstrating professional judgment: Critical incident account**
>
> Thinking about your last six weeks on placement, select two incidents where you had to use your professional judgment to guide your choices of action and **for each:**
>
> - Describe the background context in which you were working (up to 100 words).
> - Outline what actions you took and provide a rationale for this (up to 200 words).
> - Note what learning you've derived from your studies to guide your choices: include at least 2 references to the scholarly literature (up to 200 words).
> - Indicate the outcomes of your professional intervention and outline what you would do differently on a future occasion (if appropriate) (up to 300 words).
> - Write a short reflection about what you have learned about yourself during this critical incident (up to 200 words).
>
> Maximum word count; 2,000 words i.e. no more than 1,000 words in total for each incident.

4. Tasks to encourage students to become **metalearners through reflection** could include:
- Write a 200-word reflection on how you sourced this information, how you made your selection, and, choosing one item from your list from which you learned most, critically evaluate the information contained in it, and say why you found that particular item so useful.

- Summarise your learning in the form of a 300-word blog post as if for your Professional Association blogsite.
- In your reflective diary, comment on what you have most learned from this assignment and note what insights you have developed from undertaking this assignment that you can carry forward into your future working life.
- Draft a short note (up to 500 words) for your reflective diary considering to what extent you feel equipped by your training to work with this client/ in this context and indicating what kinds of CPD would be most helpful to you.
- Reading through your feedback on your previous assignment, identify three things you can do to improve your performance in future assignments.
- Looking back at the peer review session organised part-way through the module, identify new insights you generated and how these insights impacted on the work you submitted for assessment (300 words).

STEP 6: Modifiers, developments and range statements

To help both you as assessors and the students completing the assignments, it's important that students are guided about the scale and scope of what is required in each of the related but integrated tasks, which are each focused on a clear and manageable task. The aim is that these will together comprise a framework of elements that can be really helpful to students who don't know how to start tackling the assignment, representing an inclusive approach. So, for example, in the examples above you can see that guidance on word-counts, time duration, formats of outputs and so on is provided. We suggest that it makes assessment and marking more feasible for staff and students, if tasks are – especially in the early stages of the programme – clearly delineated with examples provided of what kind of output is expected.

In order to help students understand the expectations, your guidance might include modifying statements associated with the task like:

- Your financial recommendations should include sufficient detail to give your funders confidence in your abilities to remain viable;
- Your briefing documents for your minister and the team supporting them should contain, in particular, details about employment and housing costs locally;
- Your guidance in the use of this equipment should enable staff to work independently, safely and appropriately;
- Your advice on purchasing decisions needs to be sufficiently up-to-date (covering the last six months) and detailed, to allow your company to decide about new acquisitions and divesting of assets;
- Your plans should take account of the potential for a serious flooding incident that affects more than 50% of your site.

Range statements can provide guidance to help students understand what kinds of performance is associated with different bands of grades. These used to be widely used on HNC and HND programmes, but some found them rather formulaic.

The key feature of this stage is to provide sufficient scaffolding and guidance to students so that the task seems achievable rather than daunting, without over-prescribing outcomes.

Conclusions

We propose that our systematic 6-step approach to assignment design need not take overwhelming amounts of time to enable you to produce learning-oriented, more authentic assignments for your students, since it is possible to creatively recycle both scenarios and activities, reusing contexts with different tasks or the same tasks with modified scenarios/data. The benefits in terms of student engagement are proven, as those providing the examples in our compendia can confirm, showing that students tend to engage more deeply, and potentially achieve higher marks overall, when they are provided with assessment activities requiring them to go well beyond what traditional approaches required.

You can find all of the assessment and feedback guides from the LTA here: **https://lta.hw.ac.uk/resources/assessment-and-feedback/**

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