

3: LEARNING OUTCOMES AND ASSESSMENT

Assessment is subject to many drivers and challenges. These include the influences on assessment criteria and processes of professional bodies (the Nursing and Midwifery Council, Teacher Training Agency, British Psychological Association etc); and the regulations, policies and strategies of the institution and its approach to quality management. The latter will include consideration of academic standards, benchmarking with the sector, QAA codes of practice and approaches to curriculum design.

'Assessment' refers to processes which set out to measure the outcomes of students' learning – whether this is knowledge, understanding or skills: 'it provides the basis for decisions on whether a student is ready to proceed, to qualify for an award or to demonstrate competence to practise.'¹

Teaching, learning and assessment processes linked together by reflection, feedback and evaluation strengthen quality and standards. These links are dynamic within and at the end of each cycle of practice, are developmental and contribute to enhancement of the student experience.

A fundamental challenge is to combine the assessment **of** learning with assessment **for** learning in a way that is reflective, quality assuring and forward looking for both the tutor and student.

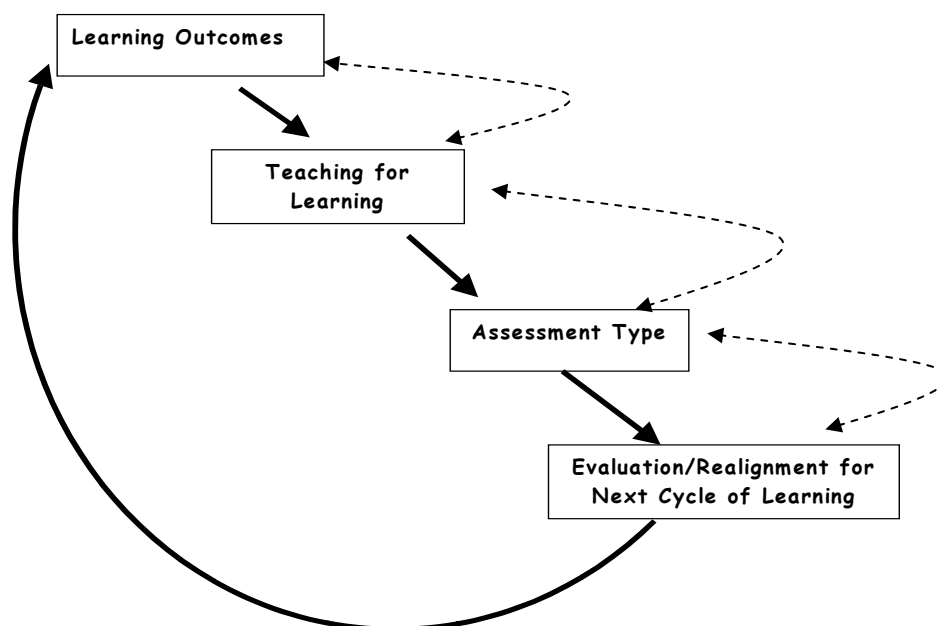
Figure 1 is an interpretation of John Biggs' notion of Constructive Alignment². It challenges curriculum designers and teachers to align their assessment and evaluation processes in ways that ensure that students' learning is optimised. Whilst the above is a simple representation, it invites us to consider what we want students to learn (learning outcomes); how we may design the most appropriate experiences for this to happen (teaching); how we may assess

¹ Quality Assurance Agency for Higher Education, Code of Practice, Section 6: *Assessment of Students* (May 2000), paragraph 6.

² Biggs, J. (1999) *Teaching for Quality Learning at University: what the student does*. OU Press

whether the intended learning has been achieved and, if so, how well? The final stage of evaluation and reflection focuses on asking oneself if the design of the previous components was effective and to reflect backwards to consider whether a redesign of teaching, learning and assessment might be required. It is forward looking and enhancing. The solid arrows in Figure 1 (an extension of Biggs' model) indicate a longer 'loop' of enhancement after evaluation. The dotted arrows invite us to consider the 'shorter loops' of enhancement that are characterised by ongoing evaluation and change between consecutive instances of teaching . This model may be useful in a number of ways, namely in considering the link between successive teaching sessions, in evaluating and reviewing the delivery of modules prior to their next delivery, and in the longer term in amending and critically reviewing programmes in which these modules sit.

Figure 1. Constructive Alignment



Quality management and enhancement (QME) is a multifaceted process. In terms of student experience, it can encompass all those components that may have a positive or negative influence upon it. Focusing on the interplay between learning outcomes, the appropriateness of teaching, learning support, guidance, assessment and evaluation practices can lead to integrated, forward-looking, dynamic and reflective practice. This reflective practice may be approached by asking the following questions. To what extent has each of these components

been fit for purpose? How has each part worked and what modifications may be needed? The result can be an affirmation of practice or a stimulus for debate and reflection, leading to the enhancement of practice.

The following sections consider the framing of learning outcomes, their association with assessment types and tasks, and how we may think and behave during the process of assessment. The final part explores the role and dimensions of evaluation into which assessment and other data may feed.

A starting point for analysing design for constructive alignment will, in this chapter, be learning outcomes, and it may be helpful to consider the discussion here alongside the guidance on curriculum design in Chapter 2.

The expression of learning outcomes

The term 'intended learning outcomes' (ILOs) is used to describe, explicitly, what a learner should know, understand and be able to do as a result of their learning. In the interpretation offered here it invites us to consider learning that may extend beyond that which is expected, where students generate new knowledge and understanding. This interpretation relates to the contestable nature of knowledge and ideas and is permissive compared with 'right answer' models of assessment. As such, intended learning outcomes should be linked to a threshold demonstration of learning whilst recognising this aspirational component.

ILOs are often appropriately specific to their location within subject specialisms. They will usually attend to factual knowledge and comprehension and, where appropriate, professional knowledge and skills. They may also be general in nature and address the demonstration of key skills (such as defined in 'Key Skills and the Edge Hill Graduate/Diplomat'³) cognitive skills (e.g. analysis, reflection, prediction) and should reflect the expected level of progression in student self-management and autonomy. The categorisation of ILOs may be contestable, but a frequently used approach (as adopted by the QAA) is as below:

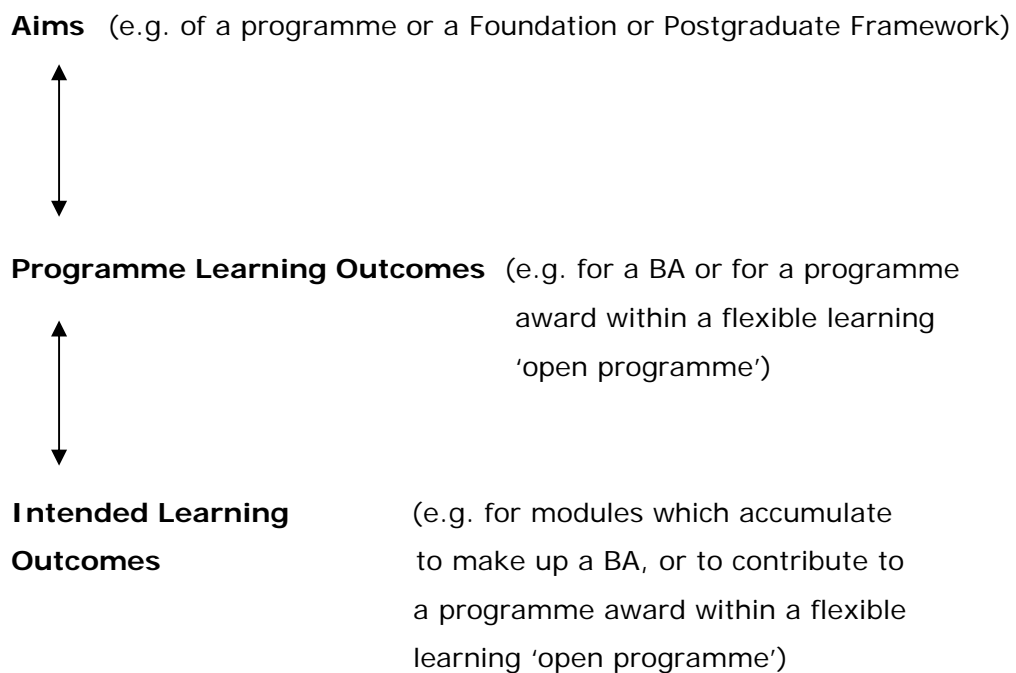
- Knowledge and understanding of facts and concepts
- Cognitive Skills

³ Key Skills and the Edge Hill Graduate/Diplomat. The institutional policy on Key Skills and the curriculum. Revised 2003.

- Subject-specific skills
- Professional/practical skills
- Key skills.

The expression of ILOs is accompanied by a number of challenges. These will include the need to ensure that the ILOs are capable of being assessed, that they are intelligible to assessors and students, and that they reflect and contribute to the overall programme outcomes. This links to the coherence of a curriculum and the expectation that module ILOs will be mapped against the expectations of programme outcomes (which in turn must be consistent with subject benchmark standards, the Framework for Higher Education Qualifications, and – as appropriate – with professional and statutory body requirements).

ILOs can be situated within the following scheme:



ILOs play a role in describing and determining the progression of a student's learning within a programme. They should reflect the increasing levels of complexity and challenge, and the development of learner autonomy. ILOs can be used as the basis upon which curriculum designers articulate progression through the ascending levels of undergraduate programmes. Support for expressing ILOs in terms that are appropriate to the proposed level of credit can be found in Edge Hill's guidance on 'level descriptors'. It follows that this progression, grounded in

the writing of learning outcomes and aligned with the planned learning experiences and assessment procedures, will enable students to demonstrate their learning in a coherent and developmental fashion. Progression should be characterised by learning outcomes which successively, require increasing ability to operate in increasingly complex and uncertain contexts, and which reflect demands that students develop a widening repertoire of skills and knowledge. The level of a module should be apparent from the intended learning outcomes linked with the indicative content (and its conceptual difficulty), learning resources, assessment tasks and the teaching for learning strategies employed by staff.

It is particularly important that assessment tasks are designed to reflect the expectations of progression in learning, support and challenge. At Level 1, tasks may be structured with a series of formative exercises preceding a summative assessment. At Level 3 there is a greater expectation of challenge and autonomy, with students addressing assessment tasks requiring more complex analysis, with less structured support than at the preceding levels.

The language in which learning outcomes are expressed must be consistent with the level of the module. The ultimate test when writing a learning outcome is whether or not the action taken by the participants can practically be assessed. It is useful to use 'action verbs' (linked to being able to see what is learned and done) for example, create, plan, revise, analyse, design, select, utilise, apply, demonstrate, prepare, use, compute, discuss, explain, predict, assess, compare, rate, critique. All represent characteristics which can be embedded in the design of assessment tasks. This is more difficult with verbs that are prone to different interpretations, in terms of the action they are specifying, and which may represent things that cannot be readily observed or measured. On reflection, how helpful are words and phrases like 'know', 'become aware of', 'appreciate', 'understand', 'become familiar with' when designing assessment tasks and assessing, with specificity, whether the intended learning has taken place?

A device that has proved useful in supporting the writing of clear, assessable learning outcomes is illustrated in Figure 3.

Figure 3.

On successful completion of this module/unit, a student will be able to:

Active verb/Phrase	Object	Context/Condition
Provide a detailed explanation and evaluation	the relationship	between support and challenge in mentoring relationships
Describe in detail and exemplify	the principles	of constructivism

Adapted from assessment guidance materials SHU, 2004

(Further guidance on writing ILOs is available on the Edge Hill TLDU website)

Another common challenge arises when ILOs refer to a process that has been learned. For example, 'undertake a research dissertation' is about an action alone, whereas 'demonstrate the ability to plan, review and implement a research dissertation' is focused on processes that can be demonstrated by the learner.

Reference to specific theories or information in ILOs may be better included in indicative content, to accommodate changes arising from updating and the research and scholarship of tutors. This can allow for ILOs with a longer 'shelf life'.

It may be useful, when writing intended learning outcomes at a particular level, to consider them as reflecting what a student will have to do to pass i.e. because a pass, according to the current Edge Hill position, is achieved by demonstrating all of the learning outcomes at a threshold level.

There are several interesting and challenging scenarios and questions that may emerge in evaluating assessment tasks and in judging whether a student has passed a module. For example it is not uncommon to assess work that is excellent in its general features, although not all of the intended learning outcomes have been demonstrated (currently, this would be a fail). Modules can frequently contain multiple assessment tasks that assess learning outcomes more than once. Why? What are the benefits of this in terms of assessing the success of the student? If there is such repetition, one may helpfully reconsider the

balance of formative assessment and feedback within teaching and the potential burdens imposed upon students and assessors. In short, if ILOs are assessed more than once, there needs to be a clear rationale for this.

The next section considers the relationship between intended learning outcomes and assessment approaches. How can they be fit for the purpose of ensuring that the intended learning outcomes can indeed be demonstrated and assessed?

Assessment design and learning outcomes – ensuring ‘Constructive Alignment’

If intended learning outcomes must be assessable, then the assessment tool and task must allow students to demonstrate their learning. This may be as simple as ensuring the appropriateness of the medium (e.g. if the ILO focuses on the oral presentation of an argument, then an essay would not be an appropriate mode of assessment). It would be uncommon and perhaps unreasonable to expect a beginning undergraduate to demonstrate the advanced learning outcomes expected of a final year dissertation. This would constitute a mismatch between the degree of challenge, complexity and autonomy embedded in the expectations of assessment task. The crux question may be the extent to which the assessment task gives the student opportunity to demonstrate each learning outcome in order to show the type and level of learning that is expected and has been validated? Indeed, this is in part the rationale underpinning the communication of assessment tasks to external examiners (whose role includes advising on the fitness for purpose of assessment tasks, and confirming their level, as part of their function in benchmarking academic standards).

The amendments to the Disability and Discrimination Act which include SENDA, require attention to ‘reasonable adjustment’ to assessment tasks so as not to exclude those with particular challenges to their learning. The expectation is one of inclusivity. Whilst Edge Hill has provision for modification of an assessment task where it may exclude an individual with a disability, it is inclusive in that it allows them to demonstrate the same learning outcomes, but by a different assessment vehicle, and maintains academic standards. This notion does raise a challenge as to whether, for a given set of ILOs, all students need to perform the same assessment task or whether flexibility and choice, related to preference and style may be given more consideration in future programme design. This would need debate about the experience of students on a programme and equity.

The explanation of ILOs to students and of how they may demonstrate them is key to engaging students with their assessment and empowering them to achieve. Articulation of such explanation and making processes explicit to students and staff who assess are key to checking the constructive alignment of ILOs with the assessment task. It facilitates the assessment **for** and **of** learning.

The purposes of the range of assessment methods

Assessment serves the following purposes among others:

- diagnosing student potential;
- evaluating student progress and identifying possible challenges they may be experiencing in their learning;
- providing a means of feedback to students;
- motivating students by requiring them to demonstrate the knowledge, understanding, skills and competencies they have developed;
- measuring achievement at appropriate academic levels
- providing staff with information about the effectiveness of their teaching and of students' learning;
- contributing to quality assurance, by monitoring the extent to which students are achieving appropriate standards.

Functions of assessment include:

- **Diagnostic assessment**, which seeks to predict or measure a student's aptitude and preparedness for a module or programme of study.
- **Formative assessment**, which gives students feedback on the progress they are making during the course of their learning. Marks from formative assessment are not usually used in determining the grading of a learner's final performance and achievement.
- **Summative assessment**, which establishes what a student has achieved during or at the end of a process of learning. It does not have to be the same as terminal assessment, since continuous assessment may also be part of summative assessment. Marks

from summative assessments are used in determining the grading of a learner's final performance and achievement.

An assessment may serve one, more or all of these functions and may have formal, recorded components or it may be less formal and involve dialogue between tutors and students. The focus of effectiveness should be on designing assessment **for** and **of** learning.

Temporal aspects of assessment include:

- **Continuous assessment**, which involves assessment at different points in the learning process, in contrast to terminal assessment which only takes place at the end of the learning process.
- **Terminal assessment**, which involves assessment at the end point in the learning process, in contrast to continuous assessment.

Reference points against which performance is judged include:

- **Criterion-referenced assessment.** In this type of assessment certain criteria have to be met in order to succeed. Using criterion-referenced assessment all students could pass or gain 100%; or they could all fail or gain 0%. There is no reason to try to obtain a normal distribution curve of grades. This is the position adopted at Edge Hill.
- **Ipsative assessment** refers to a type of assessment which measures a student's performance against her/his own previous performance and self-defined criteria. It is alternatively called self-referenced assessment and is a typical feature of personal development planning and reflective portfolio processes.
- **Norm-referenced assessment.** This compares one student's performance with other students, and grades students in a rank order based on a distribution of marks. Using norm-referenced assessment an assessor might try to ensure a normal distribution curve of grades in any piece of assessment. Given the grounding of assessment in ILOs and assessment grading criteria in the UK higher education sector, this process is rarely, if at all, used.

We should routinely consider the repertoire of assessment items that we currently deploy and reflect on whether we could, perhaps, be more creative in providing opportunities for students to demonstrate what they know, understand and do. Is the repertoire extensive or limited, extending or limiting?⁴

Education should increase students' confidence in self-assessment and self-knowledge, and their ability to evaluate their own performance. These capacities can be developed through student involvement in the assessment process, possibly through their engagement in peer assessment. Peer assessment may be used more frequently in formative than in summative assessment. It requires careful consideration of equity, consistency and standards if it is to be associated with grading. It requires students to be competent and consistent in their judgements, mirroring the practice of academic tutors. This is an area of risk, and its existence in terms of the balance between formative and summative assessment is worthy of further debate and exploration.

Assessment grading criteria

Assessment grading criteria can assist assessors in answering two fundamental questions:

- Has the student demonstrated the ILOs in such a way that one is secure in the judgement that they have 'passed' the threshold criteria assigned to that level?
- If so, how well have they passed and what class can be assigned to the performance?

Assessment grading criteria define our expectations of both students and assessors, and they promote a transparent, fair, rigorous, consistent approach to the making assessment decisions. Grading criteria also provide moderators and external examiners with a common reference point, a basis for feedback to students which can be developmental and assist them with new learning and their next assessment encounter.

⁴ The LTSN Generic Centre (now within the Higher Education Academy) Series number 3, Assessment: A guide for Lecturers provides an accessible resource via which to explore current practices.

The standards of assessment are governed by the Framework for Higher Education Qualifications. This describes outcomes that encompass a wide range of qualifications and disciplines. As such, the grading criteria that we devise must assist us in establishing whether students have achieved the standard of the award and how well they have demonstrated their achievement.

It is increasingly common practice in the HE sector to produce grading criteria for each level of an award. Since the expectations of a pass or a first class piece of work will vary by level, we need to consider the position outlined earlier on progression, ensuring that ILOs are structured so as to reflect increasing degrees of complexity, challenge and autonomy as students ascend through their programme of study. Assessment should be linked with design for and demonstration of that progression in subsequent performances as students proceed towards a final award. If this is the starting position, then separate grading criteria for each level may be required to reflect this progression, to make confident judgements about performance. Again, this facilitates targeting of feedback related to the components of the performance, its level and the setting of developmental targets. So, the notion of a single set of grading criteria to fit all levels of undergraduate assessment may be difficult to defend. However, what is key to the process of valid, consistent assessment is an agreed (central) reference point against which grading judgements can be addressed and consistency and transparency demonstrated.

A further challenge is the alignment of the assessment grading criteria with the assessment process. For example, criteria devised for the assessment of written work, oral work and posters will have their own distinct features.

In summary, when reflecting upon current assessment grading criteria, undertaking revisions to existing ones, or adopting and adapting existing criteria, the following should be considered:

- Do grading criteria align with/match the assessment task and the ILOs?
- Have they been devised with consideration of the HEQF?
- Do the criteria recognise progression across levels?
- Do the criteria relate to learning across the five types of intended learning outcomes? (knowledge and understanding of facts and concepts; cognitive skills, subject-specific skills; professional/practical skills; key skills).

Assessment grading criteria should be communicated to students in module and programme handbooks. However, their understanding and engagement may be enhanced by tutors modelling the assessment of samples of work against the intended learning outcomes and grading criteria and constructing feedback on the piece as a result. This can be done on a screen and then reinforced by asking students in groups to undertake a similar exercise in order to gain understanding of the expectations of assessment and the importance of feedback. This is a particularly useful approach with students new to higher education, and prior to their first assessments, as part of an academic induction process.

Assessment outside of Edge Hill ('workplaces' and 'practices')

Assessment may occur in numerous settings such as schools, workplaces, hospitals and other public sector environments. Whilst the principles of assessment for learning set out in this chapter still stand, the risks to academic and professional standards associated with the assessment of learning outside of the institution may be exacerbated if due caution is not exercised. Some key considerations are embodied in the following questions:

- Can the ILOs, as phrased be assessed by the stated method of assessment?
- Has due consideration been given to PSB requirements (e.g. NMC, TTA)
- Are the ILOs and grading criteria clear to assessors and students?
- Are assessors adequately prepared? (Training? Engagement with induction? Involvement with moderation?) Are their CVs adequate to support the appropriate HE level of assessment?
- Are assessors engaged with the evaluation of the learning (in relation to assessing and moderating) and involved in quality management processes?
- What checks and balances are in place to ensure that the above are considered?

Marking schemes

The term marking scheme may be helpfully represented as 'guidance on demonstrating achievement of learning outcomes'. Marking schemes (except when there are discrete/finite answers e.g. to a mathematical calculation) will usually be indicative of the range of responses that a student may make to

demonstrate that they have sufficiently demonstrated the learning defined in the learning outcomes at the assigned level. They will be indicative, and as such they serve as a guide to the marker as to the types of feature that are required to achieve this demonstration. They will not be exhaustive or set out a 'right answer' (unless they align with the exception illustrated above), as we have recognised the need to view knowledge as sometimes contestable and that critical analyses and argument, novelty, and creativity are fundamental to higher education.

A marking scheme should perform several functions:

- to check the fitness for purpose of the set assessment task
- to enable students to engage with it, and
- to allow markers to evaluate the engagement of students with the learning outcomes prior to deploying the grading criteria which will determine the class assigned to the work
- to contribute to the process of evaluation and enhancement of the next delivery of the assessment component.

For assessment tasks requiring students to work with contestable issues and to bring creativity or unique analyses to their work, a mark scheme will necessarily be indicative and can be shared with students. Such mark schemes may provide guidance as to the types of area they might explore or desirable features they could include, without 'giving the answers' (which itself may be a contestable issue if universities often see knowledge as a provisional state). They can make the requirements of assessment more accessible and explicit.

Assessment and Word Limits

The skill of writing to a strict word limit can be described as the distillation of information and ideas, and precise communication. If this is a desired feature of students' performance in an assessment it is best grounded in its intended learning outcomes and assessment criteria. Our recent discussions at Edge Hill have reinforced this position so a student's grade should only be affected when there is a word limit clearly stated in the learning outcomes and/or assessment criteria. This obviates the need for the imposition of other kinds of penalty for exceeding notional word limits. A student who writes less than the specified word limit should, similarly, be judged against the learning outcomes and assessment

criteria. The use of word limits as guidance, to enable staff and students to gauge workloads is, however, a useful device to incorporate at validation and within student information about assessment.

The conduct of assessment processes (including moderation and external examining)

There are increasing pressures on students to manage their time as many have significant hours of employment and family commitments. The amount of assessment and the demands made on students needs to be realistic, and related to the number of learning hours attached to the module/programme. Students' learning should not be impeded by an overload of assessment requirements, but be of a frequency and volume which is appropriate to support learning and to achieve the expected academic standards. This raises the need for us to monitor timings and loads of assessments within programmes and across programmes, particularly in joint honours and major/minor programmes.

It is important to consider assessment tasks and provision for assessment locations which are inclusive of students with disabilities and particular learning needs. Difficulties can be experienced by students in accessing learning resources, with the physical environment, with rates of information processing and in communicating their learning. The SENDA component of the revisions to the Disability Discrimination act requires us to make 'reasonable adjustments' including those to assessment. There are existing guidelines on amendments to assessment at Edge Hill to promote inclusion, without sacrificing standards.⁵

When preparing to undertake assessment it may be useful to consider the questions one may ask when assessing a piece of work on the journey to making a judgement about the mark to be awarded as one applies the grading criteria. These could be phrased as follows:

- Has the student demonstrated all the intended learning outcomes at the threshold according to the criteria determining a '40% pass'?
- If so, how well? Which class in the grading criteria does it best fit into, so I can award a mark?

⁵ The Assessment of Students with Disabilities and/or Specific Learning Difficulties – Revised Guidelines, Updated 2002.

Application of these questions during assessment will ensure consistency in standards across assessors. It should provide the backdrop to dialogue in moderation sessions aimed at checking that the assignment of marks is sound and grounded in the criteria. This approach, if the feedback is related to the criteria for the mark, should demonstrate confidence in the judgements made and clearly communicate development opportunities to students. Clear criteria for marks above 70% also allow for confident judgements to be made and communicated about excellent work. Similarly, feedback grounded in the grading criteria convey the reasons why a mark of less than a threshold pass has been decided upon and help students to understand the advice that is offered.

Feedback to Students

If we subscribe fully to students having an assessment experience that is for, as well as of learning, it follows that it is important they receive constructive, appropriate and timely feedback on all elements of assessment used.

Effective feedback, related to improvement of learning is best constructed in specific relation to the ILOs and the grading criteria. Students can then better understand the grades they receive and are more likely to engage with developmental advice. The shape and design of feedback forms is of less importance than the feedback itself.

Feedback which is clearly related to the assessment assists in the communication of marks awarded at grade boundaries. It can add clarity to communication. This will be significant to students and moderators when considering the decision to award fails and first class marks. The latter, upper end of the range of marks can be awarded with added confidence if grading criteria are written so as to map out the expectations of excellence in the region above 70%.

Moderation of Assessed Work and External Examining

Moderation is as a multi-layered dialogue between markers and moderators. It serves a number of purposes including checking for consistency (and the application of grading criteria), professional development and importantly the evaluation of learning which can feed back into the future design and delivery of

teaching for learning. We, like all HE institutions have regulations and quality management requirements for the moderation of assessed work (full details of these expectations can be found at the TLD website).

The moderation process focuses attention on assessment in terms of:

- Validity – matching assessment tasks with ILOs and grading criteria
- Feasibility – timing, resources
- Reliability – consistency of marking against ILOs and grading criteria
- Future Assessment – considering whether assessment of and for learning worked and discussing potential modifications.

Moderation, with reflection on the above can be a forward-looking quality enhancement process. Best practice includes moderators keeping a record of the outcomes of the process which informs the evaluation of modules and programmes prior to their next presentation, and the use of moderation outcomes in formative feedback to groups of students as they progress through a programme. Using moderation simply to confirm standards, without this link to evaluation and enhancement is a missed opportunity.

Professional development and attention to consistency of standards is often further extended by cross moderation events between programmes, where colleagues may engage with the analysis of the application of assessment grading criteria across modules and even across programmes. This is not only good practice in monitoring standards, but provides opportunities for professional development and the sharing of good practice in the design of assessment tasks and processes.

All moderation events provide a forum for exploring disagreements, with discussions leading to the involvement of third party moderators and, on rare occasions, guidance from the external examiner.

External Examiners

A key role of the external examiner is to moderate the fitness for purpose of assessment tasks, and the application of grading criteria. It is part of their responsibility for benchmarking academic standards against their own institutions and others in which they perform this role.

To this end, it is useful to reflect upon practice and what one does to:

- Ensure that external examiners have a detailed knowledge of the programme being assessed
- Ensure that they know the assessment system that you use, including moderation and sampling processes
- Brief them fully on their role
- Gather full and informative feedback from them
- Involve them in the assessment design and moderation processes
- Ensure good lines of communication.

The relationship with external examiners is in essence a 'critical friendship' which is helpful if cultivated and which is a requirement for all level 2 and 3 and postgraduate assessments. In terms of confirming standards, fundamentally their role is to benchmark the decisions made by assessors, and which have been internally moderated, with their own institutions and with others in which they externally examine. It is essentially a verification role. A common misconception is that they may change individual students' marks within a sample after internal moderation has occurred. This is always to be avoided, as it raises doubt over the consistency of application of grading criteria to the whole cohort group. If there is such doubt, the whole cohort may need reassessment with marks being adjusted as necessary to ensure consistency and equity. Good moderation procedures should remove the need for this. External examiners can act as a 'third party advisor' on work where assessors cannot agree a grading at internal moderation.

The ongoing guidance and support of the external examiner, as he/she is supplied with students' work throughout the progression of levels 2 and 3 of a programme is most valuable. In essence, they can provide formative, development feedback to assessors and moderators. This is in addition to the external examiner's summative report which, whilst often having advisory components, occurs after their examination process.

We can demonstrate confidence in our assessment practices by being able to respond to the question 'how do we know whether assessment practices and judgements are consistent and students are awarded the grades and degree classifications they deserve?'

Evaluation

Research components of academic life require attention to making sense of data acquired during enquiry, including reflection, analysis and attention to multiple sources. Evaluation of the student experience as learners, including that of assessment, should include similar consideration if it is to be a fully informed, enhancing component of quality management.

In the shorter term, evaluation at the level of successive teaching sessions and at mid-module points can lead to the development of teaching for learning in a dynamic, responsive fashion. Evaluation at the end of a module should influence the critical review and redesign of programmes. Evaluation is a learning process in itself, which should enable us to impact upon effectiveness in both delivery and design of the curriculum.

In this context, evaluation, which is fit for purpose, may be tested by applying the following questions as to the extent to which it:

- looks back at the last cycle of delivery (module, programme);
- reflects upon the current cycle of delivery;
- looks forward to the next cycle of delivery (through action planning).

Reviews of evaluation processes at the level of modules have often revealed an over-reliance on student feedback questionnaires, the 'data-richness' of which can be lacking. It is helpful therefore to consider the following as additional data sources when undertaking module and programme evaluation:

- action plans from the last delivery (how has action been implemented?);
- information from student feedback during and at the end of the module;
- information gained about students' learning from assessment and moderation processes, including any input from external examiners;
- personal reflections and interpretations of tutors;
- information from peer review activities.

If evaluation is to make a difference, then it needs to extend beyond the student questionnaire. At Edge Hill, the Annual Monitoring and Review (AMR) process works best when it is compiled from such data-rich, intelligence-led evaluation. Issues and challenges that surface and are reported in evaluation in this way can lead to clearer strategic monitoring and planning. They are characteristic of

professional values related to responsibilities to offer the best possible student experience and of mature academic communities.

Assessment Boards have a quality management function in relation to evaluation of the experience of participants in assessing students, of what has been learned by tutors in assessing, and how this can impact upon future teaching, learning and assessment.