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Title:	**The Role of Formative Assessment in the NAM**
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Issue

The role of formative assessment in the NAM

Recommendation

LTC is asked to approve the recommendations contained in the paper.

Resource Implications

Resource implications relate to the volume of work required by academic and other staff to support greater use of formative assessment and the need to ensure that the volume of work submitted can be sustained via current coursework management systems.

Risk Implications

The main risks are:

1. Possible increases in staff workloads – mitigated by ensuring an integrated approach to formative assessment so that its increasing use is accompanied by a commensurate decrease in summative assessments.
2. Large numbers of formative assessments submitted via e-Vision may result in an overload on University systems (resulting in increased occurrences of systems 'outages') and increased workloads in HUBs – mitigated by ensuring an integrated approach to formative assessment so that its increasing use is accompanied by a commensurate decrease in summative assessments.

Equality and Diversity

It is not envisaged that any of the recommendations contained in the report will impact on groups with protected characteristics.

Timing of decisions

The recommendations contained in the paper relate to the NAM – and for students starting their programmes of UG study in 2013/14.

Further Information

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Background

This paper has been drafted by the ADTP, the Faculty Associated Deans for Teaching and Learning and Rebecca Westrup in EDU. It was presented to and discussed by TPPG at its meeting on 2 May 2013. It was noted by the group that there are many different types of formative assessment and this is recognised in the paper. It was agreed that it is key for new students that they complete a written assignment early in their studies so difficulties with academic writing can be picked up and support given from the start (as set out in the Corporate Plan), There was a concern from the group that large numbers of formative submissions around the same time might cause technological issues – recent 'outages' when the system is at high demand, for example, need to be considered. The Group also noted that the increase in the submission of formative assignments might also impact negatively on markers & LTS HUBs. The Group recommended that the increased emphasis on formative assessment should be used for 1st yr NAM students and then subsequently reviewed and if necessary amended. The impact of formative assessment should also feature in the medium and long-term evaluative plans for the NAM.

Discussion

LTC is also asked to consider and approve the recommendations contained in the paper.

Formative Assessment and the New Academic Model

"… there is more leverage to improve teaching through changing aspects of assessment than there is in changing anything else." [i] #
"… helpful formative feedback on how students are doing makes more difference to student learning than anything else that lecturers do for their students." [ii]

Executive Summary

This development of this paper on the role of formative assessment in the NAM was 'flagged' in the ADTP's report to LTC in March 2013. It is now presented formally to LTC for consideration. It contains a number of recommendations (see below) which LTC is asked to approve. If approved, these recommendations will be built into a Code of Practice on Assessment which is currently under development. It makes sense to discuss some of the key facets of formative assessment as early as possible so that feedback from LTC can inform the final CoP.

This paper is intended to achieve 2 things:

1) To set out clear guidance on how formative assessment could be used to underpin student learning within the NAM.
2) To provide academic colleagues with helpful examples of formative assessments which have been proven to be effective at UEA and in other HEIs in the form of an annotated 'Menu'.

Central to the paper is the notion that the imaginative and creative application of formative assessment has the potential to enhance the student learning experience at UEA whilst enabling students to achieve enhanced academic outcomes. It is also informed by a desire to address aspects of 'assessment literacy' amongst our students – an awareness of how assessment works and the benefits it brings for learning. Engaging with higher education for the first time can be an overwhelming experience for some students as they adapt to a fundamentally different learning environment and a new set of 'ground rules', whilst also building new relationships with other students and their tutors. Although the entry tariffs at UEA have changed markedly over the last few years, it is still the fact that students have different levels of preparedness, varying expectations, and varying levels of awareness of HE assessment. Often, learning about assessment and the necessary feedback processes is exacerbated by the anxiety that students have about academic writing to the standard required by undergraduate studies, and the fact that they do not (fully) understand the rules and processes of this practice because they do not have access to them.

There is a need, therefore, to provide clearer on how formative assessment might work, so that staff and students can engage with it more effectively. What follows is a series of recommendations that, if approved, would help to clarify the role of formative assessment within the NAM so that its value can be maximised for staff and students alike.

Recommendations

Designing formative assessment strategies

- All modules should include at least **one** formative assignment. This principle is based on the belief that on any module, students should have an opportunity to practice their skills or test their understanding and receive feedback of some kind prior to being summatively assessed on the module in question.

- The University should not prescribe a maximum number of formative assessments. The number of formative assignments should, instead, be driven by the module leader's pedagogical strategy and the nature of the summative assessments.
- Module leaders should be free to experiment with the design and use of formative assessments and should be encouraged and supported to use the classroom and online environments as 'pedagogical laboratories' for improving student learning. Whilst some existing summative assessments might be suitable for adaptation to a formative function, colleagues should be encouraged to consider other alternatives.
- Staff should be supported and encouraged to explore the functionality/capacity within Blackboard VLE to facilitate formative assessment and automated (and often instantaneous) feedback on it. Blackboard offers many different methods of engaging students in formative work and if carefully designed VLE-based exercises such as quizzes, group tasks, wikis, blogs etc can build real learning without staff being committed to hours of marking in the traditional sense.
- A rolling programme of short CSED academic development workshops should be put in place which flag best practice and proven 'models' and that address both traditional and online formative assessment methods, and non-written and online forms of feedback.

Making formative assessment work in practice
- All assessment should have a feed-forwards function – i.e. it should be timely and provide insights that enable students to apply learning/skills in subsequent summative assessments. However, this is particularly important in determining the format and timing of formative assessments and the nature of the feedback provided on them.
- If a formative assessment takes the form of a draft submission of a summative assessment (e.g. an essay plan) the formative submission should take the form of a 'skeletal' outline and should be no more than half the length of the summative submission.
- Module leaders should be free to consider ways self and peer-assessment (and peer feedback) can be used to build students evaluative skills and awareness of marking criteria. Although peer assessment can, in some cases, reduce staff marking workloads, this should not be the primary 'driver' for using it. 'Mediating peer feedback' can be time-consuming if students are to derive the maximum benefit from it.
- Staff should be encouraged to consider the benefits of setting formative assessments that can be submitted electronically (or otherwise) via the HUBs, but there should be no proscriptive requirement that all formative work is submitted via HUBs.
- In keeping with the stated objective within the Corporate Plan, feedback on formative assessments should be returned within the 20-day rubric, and even faster where circumstances permit.
- Course Directors and Module Organisers should liaise closely to ensure that maximum benefit is derived from formative assessment, and to ensure that it is properly and effectively integrated within and across programmes, with close attention paid to its use at different Stages, its timing within the Semester/Stage, its linkage with summative assessments and the impact on overall student assessment and workload. This is especially important for Joint Degrees.
- The impact and effectiveness of formative assessment should be one of the themes considered by staff in their School's Annual Review of Assessment and Moderation (as proposed in the draft guidance on Double-Marking and Moderation).

Administrative support for and recording of formative assessment

- LTS HUBs should provide the capacity for formative assessments to be e-submitted. HUBs systems should also be configured so that absences from in-class formative assessments can be easily and quickly recorded.
- Staff should be free to consider carefully the pros and cons of LTS HUB-focused submission.
- Staff choosing not to use e-submission via the relevant LTS HUB should ensure that mechanisms are in place for ensuring that formative submissions are carefully managed so that feedback can be provided in a timely fashion.
- Course Director and/or Module Organisers must make it clear to HUBs which formative assessment(s) will (or will not) be submitted via LTS HUBs.
- In those cases where Schools wish to draw on information relating to engagement in formative assessment as evidence of 'engagement' which might be used to inform the application of General Regulation 13 (Student Attendance and Engagement), formative assessments must either have been submitted via the LTS HUB as an e-submission, or have been recorded by staff in class/practice/field environments and submitted to the relevant LTS HUB. (E.g., if a formative assessment takes the form of a class-based groupwork exercise, then the staff member overseeing this exercise should record any students absent (and therefore not engaging with the assessment) and submit this to the HUB).
- Formative assessments may be awarded a mark (e.g. a Pass or a percentage mark) by academic staff. However, this mark should only be provided as part of the feedback process and should not be formally recorded on CSV files (or on SITS).
- No marks for formative assessment should be recorded on SITS. Instead, completion of formative assignments should be recorded as a simple Y/N – a formal note as to whether the student completed and submitted the formative assessment(s) associated with the module in question.

Examples of formative assessment are referred to in the annotated 'Menu' attached to this paper as **Appendix A**. These are not intended to be proscriptive – module organisers should be free to employ whatever format of formative assessments they believe are appropriate to their modules. The purpose of Appendix A is to provide concrete example of practice that we hope will provide a source of ideas and inspiration to colleagues. Similarly it is not intended or envisaged that all formative work is submitted via the HUBs – Schools are free to determine the most effective and efficient way of facilitating submission and return of formative work.

Although increased use of formative assessment may result in increased staff workloads, this will only occur if formative assessments are simply added to existing assessment strategies in modules – as a 'bolt-on' development. Examples of practice elsewhere indicate quite clearly that creative use of assessment within modules (e.g. peer-evaluation/assessment, self-assessment, and conversion of summative to formative) can actually reduce staff workloads whilst improving student performance. The challenge for academic colleagues is to design their assessment strategies in such a way that formative assessment and summative assessment are truly 'integrated' and time spent in marking and providing feedback is re-distributed. Inevitably, it will be very important to closely monitor the impact of formative assessment on staff workloads as part of the wider evaluation of the NAM.

1) Introduction

It is widely recognised that assessment is a problem area for higher education. The nature of the problem has been articulated by Graham Gibbs:

> "There is substantial evidence suggesting that there is significant room for improvement in assessment (George & Cowan, 1999, p. 99). Recent QAA reviews reveal that assessment is generally a weak area when compared to other aspects of the curriculum; feedback is too often slow, failing to provide adequate guidance for students (Yorke, 2005, p. 127). Setting appropriate assessment is complex and not easy; many factors need to be taken into account, including numbers of students, time and resources and course objectives (Zou, 2008, p. 83). Whereas there is a growing recognition of the value of having a varied assessment regime, there continues to be too much emphasis placed on exams and standard tutor-marked essays and reports (Hornby, 2005, p. 17). There is a danger that "passive, bored students give back to teachers what they have already been given in a worthless grade-grubbing way irrelevant to their future lives" (Gibbs, 1995, p. 2)."[iii]

A great deal of research has been conducted into assessment in higher education in recent years. Some of this is summarised in the influential project called *Re-Engineering Assessment Practices* (REAP) which is based at Strathclyde University and which has a dedicated website: http://www.reap.ac.uk/Home.aspx A significant contribution to the literature on formative assessment as a particular, distinct aspect of assessment in higher education has recently been produced by staff at Heriot-Watt University.[iv]

The REAP project has produced a set of governing principles which should inform and underpin assessment design at higher education level. Assessment should:

"Empower":
1. Engage students actively in identifying or formulating criteria
2. Facilitate opportunities for self-assessment and reflection
3. Deliver feedback that helps students self-correct
4. Provide opportunities for feedback dialogue (peer and tutor-student)
5. Encourage positive motivational beliefs and self-esteem
6. Provide opportunities to apply what is learned in new tasks
7. Yield information that teachers can use to help shape teaching

"Engage":
8. Capture sufficient study time and effort in and out of class
9. Distribute students' effort evenly across topics and weeks**.**
10. Engage students in deep not just shallow learning activity
11. Communicates clear and high expectations to students.[v]

It is difficult to find a single, agreed definition of formative assessment. However, the following might serve our purpose:

Formative assessment is a process used by tutors and students during the teaching of a course that provides feedback to improve students' achievement of intended instructional outcomes. It is assessment <u>for</u> learning rather than assessment of learning.

Another definition, developed in this case by the Reform of Assessment Group (RAG) in 2002 is:
Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there.[vi]

The following provides a less formal interpretation: "When the cook tastes the soup it is formative evaluation; when the dinner guest tastes the soup, it is summative evaluation."[vii]

Formative assessment, as part of an over-arching assessment strategy, can be viewed as an 'event', but is more appropriately conceptualised as a *'process'*. In one US[viii] website it is further defined as follows:

➢ It is used not just by teachers but by both teachers and students.
➢ Formative assessment takes place during instruction.
➢ It provides assessment-based feedback to teachers and students.
➢ The function of this feedback is to help teachers and students make adjustments that will improve students' achievement of intended curricular aims.

Whilst there are many ways of defining formative assessment, recent research into this area of practice in higher education settings within the REAP project has produced a set of **12** formative assessment principles that can help tutors maximise its effectiveness and the impact on student learning (see **Table 1**).

N	Principle	Questions to consider
1	Help clarify what good performance is (goals, criteria, standards)	*To what extent do students in your course have opportunities to engage actively with goals, criteria and standards, before, during and after an assessment task?*
2	Encourage 'time and effort' on challenging learning tasks	*To what extent do your assessment tasks encourage regular study in and out of class and deep rather than surface learning?*
3	Deliver high quality feedback information that helps learners self-correct	*What kind of teacher feedback do you provide – in what ways does it help students self-assess and self-correct?*
4	Provide opportunities to act on feedback (to close any gap between current and desired performance)	*To what extent is feedback attended to and acted upon by students in your course, and if so, in what ways?*
5	Ensure that summative assessment has a positive impact on learning	*To what extent are your summative and formative assessments aligned and support the development of valued qualities, skills and understanding.*
6	Encourage interaction and dialogue around learning (peer and teacher-student	*What opportunities are there for feedback dialogue (peer and/or tutor-student) around assessment tasks in your course?*
7	Facilitate the development of self-assessment and reflection in learning	*To what extent are there formal opportunities for reflection, self-assessment or peer assessment in your course?*
8	Give choice in the topic, method, criteria, weighting or timing of assessments	*To what extent do students have choice in the topics, methods, criteria, weighting and/or timing of learning and assessment tasks in your course?*
9	Involve students in decision-making about assessment policy and practice	*To what extent are your students in your course kept informed or engaged in consultations regarding assessment decisions?*
10	Support the development of learning communities	*To what extent do your assessments and feedback processes help support the development of learning communities?*
11	Encourage positive motivational beliefs and self-esteem	*To what extent do your assessments and feedback processes activate your students' motivation to learn and be successful?*
12	Provide information to teachers that can be used to help shape the teaching	*To what extent do your assessments and feedback processes inform and shape your teaching?*

Table 1
Principles of good formative assessment and feedback
Source: http://www.reap.ac.uk/reap/resourcesPrinciples.html

The New Academic Model places a greater emphasis on the role of formative assessment as an aspect of the teaching and learning process within the University, and it is expected that the NAM will see a growth in formative assignments (*assessments for learning*) and a reduction in the number of summative assessments (*assessment of learning*). The enhanced emphasis on formative assessment brings many opportunities to experiment with new and creative forms of activities which build students' skills, knowledge and confidence whilst at the same time ensuring high levels of engagement and 'time on task' – the amount of time students dedicate to active and participative learning inside and outside the classroom (e.g. online). Formative assessment is a highly flexible pedagogical tool – it can vary from the relatively formal 'written exercise' that tests students understanding of a theory or concept, to the very informal discussions that take place in class and that involve students working in small groups to investigate ideas, strategies, or solutions to problems posed by the teacher. For example, it could involve students sharing 'clickers' to respond to multiple choice questions in a *Turning Point* slide, which might then be followed by instant feedback to the class on the correct/incorrect answers, or a tutor-led debate on differences of views expressed in the responses (e.g. if you find a lost lottery ticket that turns out to be a winner, and keep the winnings, is this theft?).

It is not an uncommon perception amongst staff in HEIs that increasing the use of formative assessment inevitably results in increased marking loads. When simply 'added' to existing summative assessments, or introduced without a commensurate reduction in the number of summative assessments, this concern would be entirely justified. The challenge we all face

> **Case Study 1**
> *A few weeks into the module the students were asked to work in groups to produce posters on (self-selected) topics which had already been covered. The task provided them with a meaningful revision activity as they had to consult relevant sources, draw on their developing understanding of their topic, discuss it with members of the group as well as presenting it in a different format. The posters were then exhibited in a session, during which students circulated and discussed each other's posters. It allowed them to provide as well as obtain informal formative feedback from their peers as well as revisiting topics they were less confident about. The poster session was fun and had the flavour of an event as it included external participants, refreshments and prizes. In interviews I conducted with the students many of them highlighted how much they had got out of the poster session.*[1]

is to prevent unsustainable increases in staff workload by thinking very carefully about the way in which formative assessment is implemented. For example, pressure on staff workloads can be moderated by making more use of in-class formative assessment, and other strategies such as self and student peer assessment (commonly employed in other HEIs). Experience in other HEIs has shown that these strategies can actually significantly <u>reduce</u> staff time spent in marking, whilst at the same time achieving significant enhancements in student learning and the development of employability-related skills. Benefits associated with peer-on-peer marking and feedback have been identified by previous research.[ix] Because of the established and diverse benefits of peer assessment and peer feedback, we believe that this method of promoting learning should be given particular attention when designing and implementing formative assessment in courses and modules.

2) The Rationale for Formative Assessment
Formative assessment is one tool (amongst many) that enables teachers to reassure themselves that learning is taking place, on a regular basis, inside and outside the class room and that students are

developing the knowledge, skills and attitudes they may need to demonstrate in their summative assessment(s). Because it can be used in so many different ways, and within class environments (or in the field) it helps students to recognise that learning on a degree programme is not just a matter of passing summative assessments, and that it should be an on-going, seamless, incremental process that requires active and proactive engagement. It is all too easy, as Hurford and Read have argued, for students to "perceive assessment as a process of jumping through hoops without a full understanding of its implications for more holistic learning".[x] Formative assessment can provide opportunities for students to exercise new skills or demonstrate their developing understanding of a subject without having the added stress and pressure of having a 'mark' applied to their work.

We recognise that summative assessments also build learning and feedback on summative assignments can be central to developing students' awareness of their own development and progression. This paper is in no way intended to lessen or diminish the value of summative assessment or the commitment, dedication and enthusiasm that staff invest in it.

There are compelling reasons, however, why UEA should reduce the number of summative assessments (normally focused on achieving a mark) in favour of a greater emphasis on formative assessment (assessment for learning, with accompanying feedback). Firstly, summative assessment, especially when it takes the form of Course Tests and Exams is expensive in staff time – both academic and administrative. Marking essays is also very labour-intensive and time-consuming. Setting large numbers of summative assessments can also reinforce an 'instrumentalist' approach amongst students – in the sense that students focus on assessment as a means of achieving a mark, rather than as an opportunity to learn. As the number of students continues to grow, and as student expectations shift, we will all need to think smarter (especially with regard to assessment) rather than simply work harder. Research by Gibbs and others has shown that it is possible to reduce the number of summative assignments by a half or more on a degree programme and that such reductions, accompanied by a greater use of formative assessments, can actually enhance student learning and performance (whilst achieving reductions to costs of delivery):

> it was found that programmes with low levels of marked work but high levels of feedback (with no marks attached) had students who worked harder and distributed their effort evenly across weeks and across topics on courses. In contrast, where there were only one or two marked assignments per course unit, these were all students spent their time on, largely ignoring all topics other than those addressed in the assignments and spending little time on any course that did not have an assignment due in that week (Gibbs & Dunbar-Goddet, 2007)".[xi]

3) What might be considered typical?
The kinds of formative assessment employed and the number used are likely to be dictated by the learning outcomes teachers are trying to enable students to demonstrate and the kinds of

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Case Study 2
*Another assessment tool I use regularly is **Poll Everywhere**, a free polling site that allows you to poll the audience with multiple-choice or open-ended questions. Students can respond via SMS, Twitter, http://pollev.com, or a private link. As you create a poll, you choose how you would like to receive responses. You can give students a few options or narrow their choices to one or two. When you display the poll, on-screen instructions will assist students with responding. Poll Everywhere saves your previous polls so you can review past results at any time. Following a poll, you can instantly generate a word cloud from responses. You also have several options for displaying your questions: embed in a blog or other website, share via Twitter or Facebook, share a live link, embed in PowerPoint, or download for Prezi.*
Blog by a Director of Teacher Training, US University

summative assessments the students are ultimately working towards. In a semester-long 20 credit module there might be several formative assignments leading towards completion of a single summative assignment. Each of the formative assignments might be focused on providing students with opportunities to develop and practice particular skills or to test their grasp of particular ideas/concepts.

Whilst all academic staff should use formative assessments in their modules, it would be inappropriate, in our view, to undermine creativity and innovation in the use of formative assessment by proposing or setting in place a 'model' of prescriptive set of guidance about how many or what types of formative assessment should be used. In this

> **Case Study 3**
> **A favourite formative assessment – the Exit Slip**
> *When we think about all the different ways we check for understanding in the classroom, a go-to strategy for many teachers has always been the exit slip or exit ticket. For this strategy, students write at the conclusion of learning, sometimes on a half-sheet of paper with sentence starters provided. It's then collected by the teacher. Why a favorite? Being that they come at the end of a lesson, unit, or segment of study, exit slips give teachers a snapshot of the overall student learning.*
> Blog by a an Instructor at UCLA's Graduate School of Education

document we have included instead (**see Appendix 1**) a 'menu' of examples of formative assessment which we hope will help colleagues 'to use or adapt the ideas in the menu in their own courses. The examples in the menu are 'proven' models of practice that we know have been applied successfully in other HEIs.

We believe passionately that there should be an expectation that formative assessment is utilised on <u>all</u> modules so that staff have an opportunity to provide developmental feedback to students, and so students do not only find out at the end of the module that they have failed to engage with and/or demonstrate an understanding of the module content. It is important that students have early feedback and it is important that they have a chance to practice the learning/skills they will need to apply in the summative assessment(s). I cannot envisage a single subject or topic where not having some formative assessment might be viewed as a desirable state of affairs… feedback is central to student learning and leaving it until the end of a module is unlikely to be in the best interest of the module leader or the students. For this reason, LTC should stipulate that at least one formative assignment should be included on all modules.

Students do find marks a useful short-hand for indicating the level of their performance. Therefore, where appropriate staff should award a Pass/Fail <u>or</u> a percentage mark for formative assignments. However, these marks should serve solely as a form of feedback, and should not be recorded on SITS.

4) Should there be a minimum or maximum?
Whilst I would argue that there should be at least one formative assessment on every module, there should be no proscribed maximum. This should be left to the discretion of module organisers, who we would expect would liaise with the Course Director for their programme in order to ensure that the approach taken in any one module is in keeping with the programme-level assessment strategy.

5) Feedback and Feed-forwards
The emphasis within this University and in most others is on the provision of written feedback. This has a long tradition but is not always the most effective means of supporting student learning or understanding of what feedback actually is. As Price has suggested, "While staff can and do provide feedback in several ways and at several points in the learning process the focus on written feedback seems to have increased with many students only recognising written forms of feedback as

'feedback'".[xii] Written feedback will, doubtless, continue as a format within formative assessment, and this should not be discouraged, but staff should be free to consider formats which they feel are better suited to the exercise in question and the type of learning being developed. It is proposed, therefore, that the University should support staff to explore other, alternative means of providing feedback. Alternatives might include the following: individual oral feedback, generic oral feedback (cohort), Podcast feedback, MP3 file feedback, instant and automated feedback via e-assessment (Blackboard VLE), reflective feed-forwards (e.g. prior to an exam), peer feedback etc. A series of academic development workshops on formative assessment should be provided, which address, amongst other things, non-written and 'online' forms of feedback.

'Feed-forwards' is a critical concept. Students are more likely to value formative work and the feedback on it, if formative work and the feedback received links directly to what they are likely to be formally assessed on in terms of an end of module summative assignment. Building a strong link between formative and summative assignments is important. In Schools were students often fail to collect their feedback the lack of a strong link of this kind is likely to be one of the main reasons behind what may seem like apparently 'odd' behaviour. Why should a student bother collecting feedback if it has absolutely no relationship (that is easily discernible) to what they will be doing on their next assignment or on their next module(s)…. I'm deliberately 'egging' the point here, but hopefully colleagues can appreciate how this behaviour is driven by perceptions which we often do little to challenge. Formative assessment builds effective feed-forwards – students will take formative assessment seriously and engage with it effectively (even enthusiastically) if they recognise that it may be crucial in developing their knowledge/skills to complete the summative assignment successfully or to a high standard. Formative assessment should therefore have a feed-forwards function.

6) Peer –assessment in formative assessment

Peer-assessment is a key element of student learning in many HEIs. As the REAP website at Strathclyde emphasises: "… if we want students to develop critical thinking, judgement and autonomy in assignment production they should be provided with high-level evaluative experiences similar to those of experts. Peer review, students evaluating and commenting on each other's work, is one way to achieve this" [xiii] In modules which currently have large numbers of summative assignments (i.e. formally marked), colleagues may find it useful to experiment with not only converting most to a formative function, but also getting students to peer-evaluate each others' formative work. This ensures high levels of engagement, a better understanding of the assessment process, develops evaluative skills and promotes effective peer-learning. And of course, the tutor has less marking to do since the students are doing much of it themselves. This is a key point we would like to emphasise for colleagues: increasing the number of formative exercises does not necessarily mean an increase in staff workloads. The role of peer-evaluation has again been emphasised by Gibbs and others:

> "Much of the literature on the use of self- and peer-assessment is about the reliability of student marking, on the assumption that students are acting as cheap substitutes for teachers and that this is an acceptable practice provided that they can generate usable marks. But students do not need more marks: they need more feedback. The real value of self-assessment lies in students internalising the standards that are expected so that they can supervise themselves in relation to these standards and improve the quality of their own assignments prior to submitting them. This idea is at the heart of extensive work at the University of Strathclyde http://www.reap.ac.uk/ to support student learning

through assessment (Nicol, 2006) and the focus of the Assessment Standards Knowledge Exchange, a Centre for Excellence in Teaching and Learning in Higher Education http://www.brookes.ac.uk/aske/! It seems clear from a range of studies (e.g. O'Donovan et al, 2008) that students do not come to understand much about standards by reading lists of criteria. Rather they need to see exemplars of work of different standards, to make their own judgments about the qualities of these exemplars (e.g. Orsmond et al, 2002), and to gradually calibrate their own judgments so that they are in line with the judgments their teacher would make. This is rather like inexperienced researchers learning about the standards they should be aspiring to in their research articles through acting as a reviewer of others' articles".

7) How should formative assessment be employed in modules that address assessment of practice?

There are a number of instances within the University where modules assessment is focused on the assessment of practice in professional settings and placements. Where summative assessment takes the form of OSCE's or other professional practice assessments, formative assessment is unlikely to be effective or appropriate unless it is aligned with the 'practice' focus of such modules. It is recommended, therefore, that in modules of this kind formative assessment should involve observation and evaluation of the student's practical or professional skills/behaviour, and the provision of interim written or oral feedback on the student's observed practice in the setting.

8) How should formative assessment be employed in modules that are assessed solely by Examinations/Course Tests?

Whilst the number of exams will be reduced within the New Academic Model, it is likely that formal Exams and Course Tests will continue to form an important element of the assessment strategy in schools for the foreseeable future. We must address the question, therefore, as to whether the requirement for formative assessment should extend to modules assessed solely by exam. There are compelling reasons for suggesting that it should. In 'exam-only' modules formative assessment can, of course, take a variety of forms. Since students need to be prepared properly for undertaking exams, they should be offered opportunities to practice their exam-writing skills. In some modules, therefore, module organisers might wish to employ 'mock exams' as formative assessments. These provide opportunities for feedback and a dialogue between the module tutors and the students around effective examination strategies. Such formative 'mock exams' might be completed under exam conditions, or in a more 'relaxed' format (e.g. in the students' own time). However, other opportunities for formative assessment exist: a module organiser may prefer, for example, to design a formative assessment that takes the form of an assessment that builds knowledge that will be examined by the exam. If the exam was on Sixteenth Century Europe, for example, the formative assessment might be focused on exploring aspects of the Counter Reformation – something that students might draw on in the exam paper.

9) Should all formative assessments be submitted via LTS Hubs?

It is possible that the LTS HUBS may be able to receive and record all submissions of formative assessment. This opens up the possibility of recording the submission of all formative assessments via the HUBs in future. Confirmation of what LTS HUBs will be able to support is required a s a p. There are a number of benefits of using HUBs for submission:

- It ensures a robust submission and return process – and minimises the risk of some formative submissions being misplaced etc.

- It is simply an extension of the current submission process that students are already familiar with – so its straight-forwards from a student perspective.
- It saves the time of academic staff – they would not be required to collect, printing-off or returning formative assessments to students – this would be done via the HUB.
- The HUBS can record whether a submission was received or not (Y/N) and record this on SITS. This information can then be provided to module tutors, Course Directors, HoS and Exam Boards as evidence of 'student engagement'. This might inform the application of General Regulation 13 in schools.
- Recording 'engagement' in this way places the emphasis on student 'outputs' (i.e. production and submission of coursework) rather than 'inputs' (i.e. attendance in class).

Requiring all formative assessments to be submitted via HUBs therefore has many advantages. However, there are some problems to consider:

- Some formative assessments might not be easy to submit electronically in PDF format.
- This would require HUBs to receive formative work in other formats (e.g. posters, artefacts, videos etc).
- Some formative assessments might take the form of observation of practice followed by oral feedback. There might be little 'tangible' material to submit at all.
- Recording everything via HUBs would add an element of 'formality' to formative assessment, some of which, at present, might be more 'informal' in nature. Some academic staff may wish to preserve this 'informal' aspect of some formative assessments. For example, the 'flipped-lecture' in which the lecture session involves use of ARS clickers – this is effectively informal formative assessment followed immediately by feedback/explanation relating to incorrect and correct responses. This kind of formative assessment happens 'in class' and is not be amenable to HUB-based submission.
- We may wish to consider, therefore, the possibility that some formative assessments should fall outside of this formal HUB-focused process.

On balance we are of the view that the method of submission and return of formative work should be left to the discretion of Schools and module organisers. Submission via the HUB should be compulsory only in cases where Schools wish to draw on submission of formative work as evidence of effective engagement (i.e. for use in respect to Gen Reg 13).

10)   Should formative assessment include early drafts of summative assignments?

This is a problematic area. Few colleagues would probably wish to argue against the basic premise that students should have opportunities to test the skills/knowledge on which they are going to be summatively assessed. However, there are dangers in allowing students to submit formative assessments which effectively take the form of a draft submission of the summative assignment. A student who feels he/she has acted upon feedback provided on the 'formative' draft in their summative submission may, for example, feel aggrieved if their subsequent mark is a poor one. It is recommended, therefore, that the following principles are adhered to:

- If a formative assignment takes the form of a 'draft' submission of the summative assignment, the draft should be no more than half the length of the final summative submission (e.g. if the summative assessment is 2,500 words, the formative draft should

be in the order of 1,200 words and should comprise a 'skeletal' outline rather than a 'polished' piece of text.

11) What format might formative assessment take?

Wherever possible staff should focus on developing and setting formative assessments that enable students to demonstrate and test skills/knowledge in key areas of the module curriculum. For example, rather than submitting a 'draft' of the final summative submission, staff may prefer to set assignments which give students the chance to address key aspects of the final submission e.g.:

- A short critical review of a key source or a critical comparison of two sources – this might take form of a written submission or a presentation in class.
- Analysis of a conceptual model, theory or data – again this might take form of a written submission or a presentation in class.
- A small group exercise focusing on a key theme covered in the module - again this might take form of a written submission or a presentation in class.
- A discussion of a single aspect of the module content which has recently been covered in the media - a written submission or a presentation in class.
- A module media review portfolio – a critical appraisal (over first 6 weeks of a module) of articles that have appeared in the press/media – ensures that students appreciate and can evaluate how the module content relates to real world issues and problems.

All of these formative assessments would be likely to enable students to develop knowledge/skills that they could apply in a summative assignment, especially if they were accompanied by critical but encouraging/constructive feedback which facilitated a two-way (or three-way) dialogue. A 'menu' of formative assessment choices (like that provided in **Appendix A**) might be helpful, but a recipe would not. Inevitably, the nature of the overall assessment strategy for a course should rightly depend on the subject, size of cohort and nature of students and possibly other factors unique to the school or course in question.

12) Assessment as a means of capturing students' time and energy ('time on task').

Many HE staff have observed that students only 'do the work' and 'put in the time' if the assignments they are set carry marks. There is a temptation to believe, therefore, that everything has to be summatively assessed in order to ensure that students engage in the module effectively. However, experience in other HEIs indicates that this is not necessarily the case. Peer assessment has been very effectively employed in some courses (e.g. Engineering at Strathcylde) as a means of ensuring that students engage with formative assessments (Forbes and Spence; 1991, Gibbs and Simpson; 2009, p.5).

Researchers in the field of HE assessment have identified 8 key 'conditions' that academics should consider in relation to formative assessment, in order to ensure that students engage with it most effectively.

These are:
1. Reactivating or consolidating prerequisite skills or knowledge prior to introducing new material;
2. Focussing attention on important aspects of the subject;
3. Encouraging active group learning strategies;

4. Giving students opportunities to practice skills and consolidate learning;
5. Providing knowledge or results and corrective feedback;
6. Helping students monitor their own progress and develop skills of self-evaluation;
7. Guiding the choice of further instructional or learning activities to increase mastery;
8. Helping students to feel a sense of accomplishment and maintaining motivation.
(Crooks, 1988)

The literature does not support the assumption that summative assessment is the only means of ensuring 'time on task'. Not everything, therefore, has to be summatively assessed. Instead, a range of formative assessment formats can be used, often employing self, peer and group assessment, to ensure engagement and 'effort'. The key lies in ensuring that the formative assessments are relevant, well-designed and interesting, properly aligned with the demands of the summative assessment, and linked to effective feedback strategies (with feedback conceptualised as a 'dialogue', rather than a one-way process).

13) Turnaround times

The whole point of formative assessment is that it has a 'feed-forwards' purpose – it enables students to test skills/knowledge and gain confidence prior to submission of their summative assessment(s). There is little point in setting formative assessments where students receive their feedback after the submission deadline for their summative assignment(s). Staff need to think carefully, therefore, about the timing of said formative assessments and ensure that they are sufficiently early to be able to provide feedback that students can 'act upon' in time for their summative assessment(s). Formative assessment is most effective when the 'gap' between submission and return of feedback is as small as possible. For this reason staff should aim to return feedback in a timely fashion.

14) Recording formative assessment in the New Academic Model

Formative assessments will be listed on SITS along with the summative assessment items, and a flag of Y or N will be entered in SITS to record whether or not the student has taken part (i.e. 'has the student handed in the formative work or not'?). Formative assessment is about building learning rather than achieving a mark. There will be no record, therefore, in SITS of how well the student has done in the work (i.e. no mark will be recorded). The Y/N will not contribute to the overall calculation of the module, but merely record whether or not the student has done the work. Student progress boards will be supplied with reports on whether or not students have engaged with their formative assessment(s), as one measure they can use to determine whether a student has engaged effectively with their programme of study.

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Appendix A
Formative Assessment: An Annotated Menu of Possibilities

This annotated menu is intended to provide a helpful introduction to some practical approaches to formative assessment. It is not intended to be in any way prescriptive or exhaustive – there are many other examples that could be added to the menu. However, it attempts to provide some guidance on some of the more widely used and 'proven' types of formative assessment that have been used effectively at UEA or in other HEIs. The menu provides constructive 'tips' on how to use the assessments, as well as some insights into their advantages and disadvantages for tutors and/or students. It may also be useful, when designing formative assessments, to think in terms of a list of all the possible dimensions that an assessment task has and which need to be considered:

- Does the student complete the task by working alone or in a group?
- Is the task written or oral or practical?
- Is the task time-constrained or not?
- Are all, some or none of the details of the task determined by the student?
- Is the task assessed by the tutor, the student, the student's peers or the representative of an outside agency?
- Does the student perform the task inside or outside the classroom?
- Does the student perform the task inside or outside the university?
- When the student performs the task, does s/he have access to notes and books or not?
- When does the task take place during the module?
- How is feedback delivered and how is the 'feed-forwards' element (i.e. the link with a subsequent summative assessment) emphasised?

Course and module teams may wish to refer to this list when designing their assessment strategies and the formative assessments that are integrated into them.

N°	Formative Assessment Type	Tips to make it work	Pros	Cons	Other comments
1	**In class group quiz using 'Clickers'** (Students work in small groups to work through a series of multiple choice questions in class, in 'Who Wants to be a Millionaire' format, using wireless 'clickers' or Audience Response Systems. Use of this kind of approach in an Oral Diseases course at Liverpool Univ encouraged high levels of student participation and the ready application of learning to real clinical situations. *"Initial feedback from the students showed a unanimous preference for this style of teaching over the more didactic knowledge delivery")*	• Students need to have clear guidance with regard to the purpose of the quiz and its formative function. • The link between the quiz and the module 'content' or 'learning outcomes' needs to be made explicit. • Tutor needs to make link between the learning developed by the quiz and subsequent summative assessment(s) clear – one feeds into the other. • Whilst exercises like this can be used at any point during a module or a course, there may be particular value early-	• *Turning Point* software is easy to use by staff and 'clickers' are easy for students to use. • Quiz responses provide tutor with instant insights/feedback on how much students have learned or progressed. • Clickers guarantee anonymity – no 'loss of face' or embarrassment in getting answers wrong. • Feedback is instant – tutor can explain in class the basis of 'correct' answers or explain why more than one answer might be correct. • Emphasis is on inter-activity	• Relies on availability of 'clickers'. • Quiz questions need to be carefully designed. • Tutor needs to familiarise themselves with *Turning Point* software (or equivalent). • Time needs to be found in class to conduct the quiz without it being rushed. • Some students may be resistant to use of group-work in class.	• **Front-loaded assessment** – requires care and time to design but quick/easy to mark or provide feedback. • The quiz is less focused on achieving a mark – emphasis is on testing knowledge and understanding and be provided with immediate feedback in class. • Getting students to complete the quiz in pairs/small groups facilitates teamworking skills.

		on as an 'ice-breaker' – a method of facilitating communication and integration. Gives students a chance to 'get to know each other'.	and participation in the classroom and 'active learning'. • Quiz format is informal and 'fun' element can be emphasised. • Provides lots of opportunities for students to ask questions in class – tutor can use these to open-up for wider discussion.		• Promotes group cohesion and may be used to promote integration of certain groups – e.g. international students and minorities.
2	**Early draft of summative assignment** (Student submits an 'outline' draft of the assignment which they are later required to submit as a summative assessment for formal marking)	• Students need to have clear direction/guidance with regard to both the purpose and content of the formative submission. A clear word limit and instructions re layout etc are needed to ensure that students understand what is required of them. • There needs to be an explicit link with the summative assignment that follows – and students need to understand that the feedback on the draft will have an immediate 'feed-forwards' function.	• If submitted via Hub, can provide evidence of robust 'engagement'. • Provides opportunity to provide timely feedback on a draft outline – student has a clearer sense of what the summative submission should contain. • Ensures that there is a record of an assignment's development – limits likelihood of plagiarism. • Encourages 'time on task'. • Enables tutor to gain insights into level of academic 'engagement' early-on. • Promotes forward planning and discourages 'last-minute' drafting of summative work.	• Time-consuming to mark and provide useful, diagnostic feedback. • Has to be carefully managed so as to avoid marking the same submission twice. • Risk of student acting on feedback on the draft and still gaining a poor mark – resulting in dissatisfaction with the usefulness of the formative feedback. • Students may choose not to complete it if it is not a 'requirement'.	• **Back-loaded assessment** – quick and relatively simple to set, but time-consuming to mark. • It is recommended that the draft submission is no longer than <u>half</u> the word length of the summative assignment. This encourages student to 'focus' on key issues/themes in a skeletal outline and avoids marking same text twice. • Timing in critical – students need to receive feedback on the draft sufficiently early to apply it in the development of the subsequent summative submission.
3	**Online Quiz using Blackboard** (Students engage with tutor-designed quiz online via Blackboard, in their own time. Experience in other HEIs shows that regular completion of Quizzes by students can transform their subsequent performance. For example, at the University of the West of England, quizzes	• Quiz needs to be easy to access via Blackboard site. • Online quizzes are most effective when students receive automated feedback as they are completing it. • Tutor can limit time available for completion and the number of attempts	• Can be easily 'monitored' as evidence of robust 'engagement'. • Quiz responses provide tutor (and students) with insights on how much students have learned or progressed. • BB can guarantee anonymity – no 'loss of face' or	• Relies on students accessing Blackboard. • Blackboard provides a Quiz facility but its flexibility is limited. • Time-consuming to design quiz questions in Blackboard and the feedback on each question.	• **Front-loaded assessment** – requires care and time to design but <u>no time at all</u> is required to mark or provide feedback. • The quiz may less focused on achieving marks than on testing

	were integrated into a Law programme. The results were striking: *"The results are spectacular. Those who opted to take the quizzes performed very significantly better than those who did not. This difference is not just seen in the module in which the quizzes were included but throughout the first year, and it was still very evident at the point of graduation. The outcomes are all the more dramatic when the nature of those who took quizzes was examined. Quiz takers had virtually the same A level entry qualifications as non-quiz takers and yet performed far better – challenging the idea that it would be the 'better' students who took advantage of the quizzes"*) See: http://www.ukcle.ac.uk/resources/assessment-and-feedback/online-formative-assessment/	permissible – strategy needs to be driven by the aims of the assignment. • Whilst a 'mark' might be achieved it may be preferable to focus on designing the feedback on each question so that the outcome is improved learning, not a mark which won't be recorded on SITS anyway. • Students need to have clear guidance with regard to the purpose of the quiz and its formative function. • The link between the quiz and the module 'content' or 'learning outcomes' needs to be made explicit. • Tutor needs to make link (e.g. feed-forwards) between the learning developed by the quiz and subsequent summative assessment(s) clear. • Find time to review and 'unpack' the quiz in class and revisit answers, group performance etc.	embarrassment in getting answers wrong. • Feedback is instant and automated – student receives explanations or comments on each question as they complete the exercise. • Emphasis is independent study – learning outside of the classroom at a time/place of the student's choice. • Can be completed anytime/anywhere – at least anywhere where there is a link to the WWW. • Can be mobile-device friendly – student can engage with it on the bus or during a coffee break. • Quiz format is informal and 'fun' element can be emphasised. • Provides opportunities for students to subsequently ask questions in class – tutor can use these to open-up for wider discussion. • Can be used as a form of exam revision/preparation.	• Time needs to be found in class to review the quiz and the quiz answers, group's performance etc. • Link with subsequent summative assessment needs to be reinforced. • Difficult to be sure that it is the student who has completed the quiz rather than a third party.	knowledge and understanding and immediate feedback.
4	**Formative 'Wiki' Exercise** (Students work individually or in small groups to enhance an existing wiki resource (e.g. on Wikipedia) or develop a new one. At Liverpool University Wikis were used recently in a Level 3 history module. The students built an online Wiki resource that formed the basis of discussion in workshops. Each workshop was divided into sub-topics (threads) and 3-4 students collaborated on each, posting their findings on the Wiki)	• Blackboard VLE can be used to develop group Wikis. • There may be great inherent 'value' in pooling the students' expertise to enhance, refine or expand an existing Wiki such as a group of pages on *Wikipedia* as a way of contributing to the 'common good'. • Students in their 1st or 2nd year may feel more comfortable working in small	• Makes good use of e-learning technologies. • Students gain insights into how Wikis evolve and can be used –real problem, real solutions. • Students have an opportunity to develop something of 'real value' to others outside the institution. • It develops the transferable skills of advanced text editing and critical textual analysis.	• Relies on students accessing Blackboard or *Wikipedia*. • Blackboard provides a Wiki facility but its flexibility is limited. • Time needs to be found in class to review the Wiki. • Link with subsequent summative assessment needs to be reinforced. • If completed in groups, it may be difficult to monitor or be sure how much each group	• **Neutral assessment** – requires care/time to design and monitor the Wiki exercise and to mark or evaluate and/or provide feedback. • The formative element may involve weekly or fortnightly reviews of the Wiki in class or online. • The summative

		groups/pairs. 3rd years or PG students may have the skills/confidence required to work independently. • A Wiki enables students to develop their learning in a non-linear manner – e.g. just as one often navigates Wikipedia in a non-linear fashion by clicking hotlink key words/phrases – tutors may wish to emphasise this as part of the exercise.	• Can be linked directly to a summative assessment (e.g. the final Wiki pages), or may run 'parallel' to the summative assessment process. • Can be easily 'monitored' as evidence of robust 'engagement'. • Emphasis is on independent study – learning outside of the classroom at a time/place of the student's choice. • Can be completed anytime/anywhere – at least anywhere where there is a link to the WWW.	member has contributed (as in any group-work exercise). • Close monitoring of Wiki content may be required by the tutor.	element may be the final 'product' in terms of the newly developed Wiki pages. • The Wiki may focus less on achieving marks than on testing knowledge and understanding and providing feedback. • The 'value' of the Wiki to others is a crucial aspect of such a formative exercise.
5	**The Jeremy Paxman Interview** (Rather than asking students to write an essay on 'Plato's attitude to women in the *Republic*', why not take advantage of a more 'creative' approach which requires students to write, instead, a short 10 minute radio script for an interview between Paxman and Plato?)	• This could be used as a form of formative assessment in which students can play with ideas and concepts in a relaxed and 'fun' context. • It could be particularly 'fun' if students had an opportunity to 'act-out' the screen play in class. • The 'acting-out' process could be used as the 'summative' element of the assessment, with the script itself being a strictly formative element. • Detailed guidance may be required and 'exemplars' of radio scripts provided so as to provide a sense of what is expected.	• Like the poster presentation, this kind of assessment draws on different learning styles (e.g. visual, audio, kinaesthetic). • It enables students who respond less positively to traditional 'essay' tasks with alternative ways of demonstrating their learning and their enthusiasm for the subject. • It requires students to demonstrate the same kind of understanding of and insights into Plato's ideas and arguments, but within a highly entertaining radio 'debate'. • If video-taped, the acted 'performed' screen plays could be shared with a wider audience via BB or the School website.	• Students may find this an alien form of assessment, especially those outside of the Humanities. • Less confident students and those uncomfortable with role play and 'performance' may find the acting-out of the radio script a considerable challenge. • Time needs to be dedicated to the process in order to do it justice. Time in class is particularly important especially if the students are required to 'act-out' the script. If done in pairs the time commitment could be considerable. May, therefore, be suited to small groups rather than large ones. However – the writing of the script is something that can be done regardless of cohort size.	• **Back-loaded assessment** – requires little time to design but reading and providing feedback on the scripts could be comparable with that required for an essay. • **However,** if the script is 'performed' feedback could be oral and happen in class – quick and simple.
6	**Annotated bibliography** (Students develop an annotated	• Students may be entirely unfamiliar with the concept	• Students have to read, summarise and evaluate	• If the link between the annotated bibliography and a	• **Back-loaded assessment** – quick and

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	bibliography which summarises their reading up to a given point in time. The bibliography can be closely linked to the theme/focus of a subsequent summative assignment).	of an annotated bibliography. The structure and purpose of the toll may need to be clearly explained and examples/templates may need to be provided so they can articulate its value with respect to their own studies. • Tutors should consider how the annotated bibliography can be directly linked to a summative exercise/assessment in order for students to perceive its full benefits. • It may be desirable for the students to include the date they accessed each source so that the tutor can gain insights into how their reading has evolved over time, and how 'effort' has been spread between weeks. • The annotated bibliography can be peer-evaluated. It is also possible to 'pool' them into a single group resource (if this is deemed appropriate).	sources – a key transferable skill. • Can be submitted as an 'appendix' (if needed) to the summative assignment. • Enables tutors to see clear evidence of students reading and their understanding of what they have read. • Acts as a check against plagiarism/collusion – there is an 'audit' trail showing how the student's engagement with the disciplinary literature has evolved over time. • Tutor can provide a ready 'template' for students to use. • Can help students to 'structure' their future note-taking and build resources of real value in building future assignments. • Students develop critical reading skills. • Can easily be submitted via Hubs and demonstrate evidence of engagement.	summative assignment isn't made explicit, students may struggle to perceive its benefits. • Students may need guidance not only in terms of how to use the annotated bibliography, but also with respect to how they might want to make choices about what to include/exclude.	relatively simple to set, but time-consuming to mark and provide feedback on. • Develops a range of important transferable skills. • Develops a 'way of working' that might dramatically improve learning in future. • The bibliography can be submitted either <u>prior</u> to the linked summative assignment, or as part of it (e.g. as a separate appendix).
7	**The Patchwork Text** (This involves a structured series of short pieces of work produced over the course of a module. These are varied in style and form (e.g. presentation, critique of an article or newspaper column reflective review of a teaching session, summary of a group discussion). These pieces are discussed by students, then, at the end of the module the edited pieces are submitted along with a reflective, retrospective commentary 'stitching' it all together. Can be completed in groups or individually.	• The exercise can be completed by individuals or by small groups. • In a group, individuals can 'pool' resources to be included in the Patchwork Text. • In a group students can collectively (or individually) write the retrospective commentary which 'stitches' the pieces together and which teases out 'meaning' or 'salient themes' from the assemblage.	• The patchwork itself – the bits contributed – may form the formative element of the assessment. The 'retrospective' overview may be treated as the <u>summative</u> element. • The assessment is open, therefore, to some flexibility in terms of how it is conducted and assessed. • It enables students to each contribute in a meaningful way to a common resource which may have value	• This may be an 'alien' form of assessment for some students. Careful management may therefore be required on part of the tutor. • Detailed guidance may be required regarding the assignment parameters, what should be included in the 'Patchwork', and how the retrospective account should be structured. • Some students may contribute more materials	• **Neutral assessment** – requires care/time to design the exercise and to mark or evaluate and/or provide feedback. If the reflective, retrospective account is kept reasonably brief (e.g. 1,000 words), then it could be relatively quick to evaluate. If only the Patchwork is submitted as a formative exercise,

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	At Liverpool Univ staff have reported that it encourages participants to "*get involved in critical evaluation throughout the module, and that it is highly motivating and results in work of a very good standard*")	• By including the date when pieces were contributed, the students can create an 'audit trail' which shows how the resource evolved over time and how they distributed 'effort' hours.	outside of the group. • The exercise enables students to draw on 'topical' items in the media – this lends a sense of relevance and immediacy to the learning process. • The process of collecting and contributing resources ensures that students have something to focus their efforts on between class sessions. • The group-work approach encourages peer support as well as peer competition. It is easy to identity 'free-loading' students. • Can easily be submitted via Hubs and demonstrate evidence of engagement.	than others to the Patchwork – tutor may need to include an element of peer assessment (e.g. using WebPA). • Groups may become dysfunctional. An intervention strategy may be required by tutor.	feedback on the choice/range of sources/evidence may be needed. • The approach has worked well in other HEIs.
8	**Students Write Next Year's Exam!** (In the middle of a module, ask students to reflect on the module content covered so far. Ask them to design an Exam paper that can be set for next year's students which might pose a robust test of their learning in relation to the first half of the module. Ask them to justify and explain their choice of questions etc., and to provide some indication of what a model answer might comprise. The end result is an annotated exam paper with questions, justifications, and some indication of what model answers should contain).	• This kind of exercise gets students to think rather differently – in this case they are required to take off their 'student' hat, and put on their 'assessor' hat. This is a healthy process that forces students to think very carefully about the issues, concepts, ideas, debates etc that they have engaged with and how the module outcomes in question can be achieved via an assessment process – this case an Exam Paper. • This is probably best done in small groups, with students pooling their ideas and producing an agreed final 'product'. The exercise therefore also builds team-working skills and negotiation skills.	• Build group-work and team-working skills. • Students have to think carefully about the nature of exams, and how module outcomes can be demonstrated. • Provides an excellent form of exam revision for their own exams. • The short/small size of the end product (e.g. 2 sides of A4) means that the task isn't too daunting. • This might actually produce some really good ideas for future exam papers!	• This kind of exercise is almost certain to be 'alien' to most students, but is entirely appropriate as a way of addressing students' awareness of the nature and purpose of assessment. • For the exercise to have maximum benefit, sharing examples between student groups is likely to be necessary/desirable. • Dedicated time in class to review examples is likely to provide a very effective way of providing feedback, but may be time-consuming.	• Students do sometimes wonder why exams are necessary at all since they require skills and require students to work in a format which is rarely required in the workplace. This kind of exercise provides a means by which tutors can demonstrate the value that exams have as a tool for assessing learning. • The annotated exam papers produced by students may provide useful teaching materials for the tutor to use with future groups.

		• The final product may be limited to 2 sides of A4 – inc questions and justifications/bullet points. • Providing some guidance and some 'exemplars' may be necessary so that students have a clear sense of what is expected in the form of an end product.			
9	**Poster Presentation** (Completed by individual students or in small groups).	• Poster presentations can be genuinely 'empowering' for students since they enable them to demonstrate learning in an unconventional format with considerable freedom in design etc. Some tutors provide a basic 'design template' for students to utilise – this results in a more consistent visual style, but can limit creativity. • Posters often appeal to students who favour a 'visual' learning style – and also facilitate the exercise of a greater range of skills than those used in the traditional 'essay'. Tutors may wish to consider carefully what proportion of the marks available should be awarded for 'creativity or originality' and 'quality of design'.	• These can be used to give students the chance to explore issues outside of those addressed in lectures, or can provide opportunities for students to reflect on (revise) topics already covered in class. • They require students to consult relevant sources, draw on their developing understanding of their topic, discuss it with members of the group. • Students have to present ideas, concepts, findings etc it in a different format, using transferable 'design skills'. • Posters can be 'exhibited' and discussed in a class session and/or shared more widely. • Peer feedback can play a valuable role. • Poster sessions can be fun and have the flavour of an 'event', especially if they include external participants, refreshments and prizes. In other HEIs students have highlighted how much they value assessments of this kind.	• This might be an 'alien' format of assessment for some students and requires them to work in a different way. • Students require clear guidance on how to choose topics, what to include, and how to layout the poster itself. • Time and space need to be dedicated to reviewing the posters in class. Tutors need to consider if there are ways that key elements of 'content' can be covered using posters, rather than tutor-led lectures etc. • The 'feedback' process can happen orally and may include extensive use of peer feedback (students commenting on each other's posters). • Posters may be difficult to submit in e-copy format via e-Vision due to file-size constraints.	• **Front-loaded assessment** – requires care and time to design but can be relatively quick to mark - especially if peer-assessment is employed. Feedback can happen orally in class. • A number of websites now offer free download templates for poster presentations. • Extra 'value' can be gained by 'exhibiting' students' posters in the School of Study. This has two major advantages: firstly students' work is exposed to a wider audience; secondly staff and other students can be invited to 'score' or 'provide feedback' on the posters too – something which could be built into the formative feedback process.
10	**Media Log**	• It is important that students	• Very student-led, with	• Requires students to engage	• The use of Media Logs

	(Students collect items relating to the module as reported in media such as newspapers, blogs, magazines, websites etc. Each student contributes one item each week and explains or justifies its inclusion into a group media Log)	understand and appreciate the 'relevance' of the subjects they are learning and the module content. One way of achieving this is to set in place a group Media Log. This can be entirely informal, but gives each student an opportunity to contribute. This could be developed in Blackboard VLE. Students could be invited to comment and provide feedback on the new items added to the Media Log each week. The final product is a valuable, concrete resource of value to the whole cohort. It could also inform students' summative work.	emphasis on students taking responsibility for their own learning. • Informal but fun way of taking advantage of the reading, web-surfing and TV viewing of students on a weekly basis. • Gives everyone a chance to contribute. • End 'product' is a real value. • Could be a useful revision tool. • Could also be useful for subsequent cohorts. • Tutors could moderate and provide feedback on additions to the Log on a weekly or fortnightly basis. • Could 'spark' ideas for future projects and dissertations.	in the process without the expectation of receiving a 'mark' for their contributions. • Monitoring of the Log and provision of commentary/feedback requires some commitment of tutor time. • Some contributions may need to be 'moderated'.	of this kind is becoming increasingly common in HEIs. • It has the effect of 'pooling' the reading that students are collectively engaged in. • It provides a useful resource of topical materials that could influence the 'teaching materials' used by tutors in future years.
11	**The 'Whole School Project'** (This could involve all BA years working together in teams to produce a designed 'product'. At Liverpool Univ the Architecture Dept focused on student teams developing an educational 'Architectural Game'. The groups were around 7-8 in size with at least two from each year, and the year 3 students acted as managers. The exercise lasts a week and ends with presentations by each group, and judging, with prizes awarded. This is an excellent way to help deliver and encourage key skills such as group working, management skills, presentation and so on. There was a vote at the end of the project and over 95% of the students thought it was a good project to have worked on, and thought it should continue.	• This kind of project can take place outside of the 'formal' assessment process on a course – it is simply an activity within the School that builds student engagement and employability-related skills. It is voluntary and develops a sense of School 'esprit de corps'. It builds entrepreneurial qualities and attitudes and may result in a product than can be commercialised. • Commitment is needed from the School with a small staff team overseeing its development and implementation. • The informal nature of the exercise (it does not necessarily result in a 'mark'	• This kind of project can be designed by staff but without a major input of staff time during its implementation. • The projects are student-led and can include an element of peer assessment. • The whole school project promotes school cohesion and loyalty. • Products may be of a commercial or potentially commercial nature. • Awards and prizes can be recorded on the HEAR and awarded at congregation. • Builds a real sense of healthy competition between students.	• A small staff team needs to develop and oversee the whole school project. • Buy-in is needed at senior levels within the School. • Prizes/awards need to be purchased – these could take form of studentships or cash bursaries or book tokens. • May be very difficult to involve all UG students. • Voluntary nature of exercise may result in a low take-up. • Time has to be set aside to evaluate the project 'products'.	• **Front-loaded assessment** – requires care and time to design but quick to judge or evaluate. • This kind of project, if used creatively, could transform students' perceptions of their School of Study. • It facilitates cross-cohort collaboration and combats the frequently noted problem of 'lack of contact' between Year groups in Schools (e.g. Year 1 students working together with Year 2 students). • PG students could act as managers, working with UG students….

		or inform grades) is a real strength – it is about <u>learning and collaboration</u>, not achieving marks.			• It 'adds value' to the student experience by providing informal learning opportunities which have tangible, concrete outcomes.
12	**Peer-feedback on Writing** (This peer assessment is particularly useful for the writing process. Students are paired and asked to read each other's written work. The reader must identify two things the author did well (stars) and one specific suggestion for improvement (the wish). Before implementing this strategy, students must be trained on the process of providing appropriate feedback to their peers. The teacher can use this strategy as a formative assessment by circulating around the classroom and listening to the conversations between partners)	• Ask each student to write 500 words about a key theme/topic from a choice of three or four. • Then get students to review each other's work in class. • Allow time for students to discuss and carry-out reciprocal review of each other's work. • Then ask each student to award two stars and a wish (2 positives and 1 item for future development). • Tutor summarise some of the positives and all of the 'future development' items – provides a copy to the class as an aide memoire.	• Student-led. • Requires students to use evaluative skills. • Gets students to work together (good ice-breaker)? • Involves peer learning and collective input. • Requires students to think carefully about areas where their own work could be enhanced in future. • Involvement of tutor time is minimal in terms of overseeing the process.	•Some students may be unfamiliar with the notion of peer assessment and providing peer feedback. Some may feel self-conscious about sharing their written work with fellow students – even if it is only 500 words. •Needs to be carefully managed – students may need some guidance and advice regarding the peer assessment process. •Time needs to be dedicated to ensuring sufficient discussion, and summarising at end of the process.	• This is a tried, tested and proven model of formative assessment that has been extensively employed in schools for many years. There is no reason at all why it should not be as effective (or even more so) in a HE setting.
13	**Reviewing 'Exemplars' of Student Work** (Circulate anonymised examples of essays/projects etc. and review/analyse in class with students. This kind of formative exercise has a powerful impact on students and is often highly effective in 'de-mystifying' the assessment process, assessment criteria, staff expectations, structure, analysis, written English requirements etc. Mock marking exercises can be highly effective – though it is probably best to give students a chance to indicate their preferred mark anonymously. Comparing students' marks with the real (actual) mark and feedback can usefully reveal differences/gulf	• This is a strategy already employed on some modules, with considerable success. • Some staff favour sharing just 1st class 'exemplars' so that students understand better how they need to develop their approach to gain the highest marks. • Others prefer to share both weak and strong exemplars which illustrate both ineffective and effective study strategies. • Some staff combine with a detailed examination of the Senate Scale marking descriptors, or consider in relation to other ways of	• As one UEA colleague has noted from her own experience in HUM: "This practice consistently exposes and recasts first year expectations of degree level study - 'the paragraphs are much longer than I would normally do', 'I'm surprised at how many footnotes there are', 'there's no big words for the sake of it here', and 'I didn't know you were allowed to do this kind of thing', 'the essay was surprisingly interesting' - are frequent comments". • Copies of student work are readily available and	•Ideally, students should be warned in advance that their work may be used for this kind of purpose, or their permission should be sought. •Exercises like this require dedicated time in class or in seminars to explore fully the qualities of the exemplars and to give students opportunities to work in groups, unpack assessment criteria etc.	• **Neutral assessment** – relatively easy to design and can be discussed in class without need for written feedback. • One UEA lecturer has noted "Students coming into a new HE system need us to 'unpack' the expectations behind some of the words we used most often in assessment". This is a very effective way of doing just that.

	between students' expectations and those of staff) As Sambell has argued, "Lecturers should be explicit about assessment methods and criteria and discuss these with students. Students need to be clear about what constitutes good work. It's not good enough to tell students what the assessment criteria are, they need to actively participate in deepening their understanding of what good work is."	conceptualising student learning, such as Bloom's *Taxonomy*, which can be mapped against the marking bands on the Senate Scale.	anonymous submission means that scripts are often already 'anonymised'. However, exemplars need to be chosen carefully to demonstrate or illustrate key themes.		
14	**The Reflective Learning Log** (Students produce a reflective short written 'report' each week which contributes to a Reflective Learning Log. As one UEA colleague in HUM has noted: "it is not always possible to ensure that students fully engage with all of their modules, or, indeed, with all of the material on any given module. In addition, I have found often that the students lose sight of the aims of a module, or its overarching 'narrative.' The idea of the weekly log/report is to encourage the students to continue thinking about what they have learned in seminars from week to week, and to 'narrativise' the links across the semester")	• The weekly reports can be very informal, only 1 side of A4, and even handed-in anonymously. They can be collected on BB. • Tutors sometimes provide brief feedback on the weekly reports. • In some cases, tutors have tutorials to discuss weekly logs. • The 'formative' Log entries can be pulled together with a reflective narrative/analysis in a summative submission. • Students need to be guided with regard to the nature of the 'reflection' required.	• Enhances levels of continual engagement and 'effort' across the semester. • Encourages the development of continual reflection. • Helps students to take responsibility for their own learning. • Can link to a subsequent summative assignment. • Can be very informal, or submitted via HUB. • Provides evidence of engagement.	•Some students may struggle with the weekly demands placed on them to 'reflect' and provide learning reports. •The manner of providing feedback needs careful management if the time commitment is to be kept within reasonable bounds.	• **Neutral assessment** – relatively easy and quick to set the assessment and provide guidance. Regular brief feedback thereafter. • One HUM colleague has noted: "It allowed for a regular, consistent, intellectual and pedagogical conversation to be had … it resulted in 100% attendance as the students felt very strongly that this was their module that they were integral to; and the students were absolutely engaged with the material that we were studying".
15	**Self-assessment of formative essay submission** (One SCI colleague has used student self-assessment as a tool to enhance 2nd year students' understanding of what makes a really strong scientific essay or report. Some SCI students rarely write 'traditional essays' in their 1st and 2nd years, which means they sometimes struggle to	• A self-assessment checklist or 'set of criteria' can be provided to students which they complete prior to submission of the formative essay. The students reflect on how well they have met the criteria. • Tutor can then use the same checklist or criteria when	• Encourages reflection and self-assessment – important translatable skills of value in the workplace. • Encourages students to be more 'critical' of their own work prior to submission – helps to 'iron-out' common problems in writing etc. • Provides a clear reference	•As the SCI colleague in question has noted: "Overall, students prefer feedback that includes specifics on how to improve; they find self-evaluation and reflection more difficult and are less likely to engage voluntarily with this mode of formative assessment".	• **Neutral assessment** – relatively quick to design and set, and use of checklist means feedback demands are not overly onerous for the tutor. • The SCI colleague who used this self-assessment strategy

	develop well-written dissertations in the final year. The formative self-assessed essay in the 2nd year helps to address this problem. The Self-Assessment Checklist used can be found in **Appendix B**)	providing feedback. This can be used to provide rapid feedback. • Some tutors combined the exercise with workshops where resources/evidence are reviewed, and aspects of the essay/report are unpacked in more detail. • Students need to be provided with some guidance on how to self-assess, and how to apply the criteria in the self-assessment checklist.	frame against which students evaluate their performance. • Formative essay can be submitted via HUB and used to demonstrate robust engagement. • The use of the checklist form means that providing feedback is relatively quick and simple.	•The value of the assignment for future modules (feed-forwards) needs to be clearly articulated for students to engage effectively and enthusiastically.	noted that: "essay writing was improved and no students who completed the self-assessment table had significant omissions in the coursework. • A high average formative mark of 64% was maintained over two year period despite significant increase in number of international (EAL) students in second cohort.
16	**The Mock Exam & De-briefing** (Mock exams will be more than familiar to most UG and PG students. However, the nature of the 'mock exam' can be tailored to maximise the 'feed-forwards' function and the impact on student learning. The de-briefing aspect is, arguably, the most important aspect to get right – this needs to focus on areas where students performed well and on areas where knowledge, understanding, insight or analysis were lacking. Reasons for strong and poor performance can be 'unpacked' along with a detailed reflection on exam techniques/strategies, and revision of key topics. Timing is critical – students need time to absorb and act on the de-briefing prior to their summative exam).	• The choice of questions needs careful design/planning in order to develop key knowledge, insights, etc, whilst not replicating too closely the summative exam. • Tutors may wish to consider whether the 'mock' is conducted under exam conditions or in the students' own time. Each approach may have advantages and disadvantages. • Tutors may wish to include a self-assessment or peer-assessment element (or both) prior to the students' submitting their formative scripts to the tutor or the HUB for marking/feedback. • Should the 'debriefing' and feedback take the form of written feedback or happen orally/verbally in a de-briefing workshop? Or both?	• Prepares students for the particular challenges of the 'exam' format assessment – e.g. writing at speed using a pen (something students rarely have to do in other areas of their degree studies) • Builds insights into the purpose of exams, effective exam strategies, marking criteria etc. • De-briefing workshop or written de-brief provides an excellent opportunity for 'revision' of key topics, issues etc. • If the de-briefing includes a self or peer-assessment component, this can also build skills of reflection, peer evaluation etc.	•Time may need to be scheduled into the module schedule for the 'mock' exam in 'exam conditions'. •Time needs to be dedicated to the de-briefing process. •The de-briefing process may have limited value if not all the students attend. •Module schedules and pressures on contact time may limit opportunities to include a 'mock' and a formal de-briefing prior to the summative exam. •Designing mock exams is a time-consuming and complex process – not all staff may feel it is time well spent.	• In general it is desirable aim to ensure that students are properly equipped and prepared to undertake the summative assessments which influence their degree classification. In this sense, it is good practice to include 'mock' exams of this kind so that students can 'practice' the skills and strategies required in the exam room.
17	**Problem-Solving Exercise(s)** (This kind of approach to formative assessment involves setting students a series of 'problems' to explore in groups.	• For this kind of formative assessment to work most effectively, some care may need to be taken when	• Student-led approach – enhances student autonomy and self-directed learning strategies.	•Success of this formative assessment is highly dependent on students being equipped to work effectively in	• **Neutral assessment** – in the sense that the requirement for feedback is spread

		splitting the class into groups in order to ensure 'balanced' groups.	Takes the emphasis off tutor	groups, and being provided	across the semester.

#	Description				
	The following provides an example employed at Heriot Watt University: In class (seminar style room) students split into groups of 4 for all classes and they work together – peer supporting. They bring along notes and support materials. It's an informal atmosphere and students can leave to source other material, eat/drink etc. Six exercises ("Problems") are set in two week long stints. Each session is slightly more complex than the previous requiring further preparation by reading in the notes etc. Exercises are problems that require knowledge from the materials provided, external sources and other parts of the course)	• splitting the class into groups in order to ensure 'balanced' groups. • Some guidance and preparation for the group-working process may be necessary – e.g. effective strategies, accommodating differences in learning styles, awareness of team role theory etc. • Careful planning re provision of 'problems' and group learning resources in required. • Student-led problem-solving workshops may need to be backed-up with group tutorials.	• Takes the emphasis off tutor 'delivering content' and places greater emphasis on tutor as a 'facilitator'. • Students gain sense of achievement by solving problems presented to them. • Students gain profound insights into the subject/discipline. • Develops study strategies likely to be important for success in subsequent modules. • Emphasis on team-working and problem-solving develops employability skills and attitudes.	groups, and being provided with suitable 'problems' and resources required to explore them. •Groups may become dysfunctional – tutor needs to have strategies in place to deal with the problems that occasionally arise from groupwork. •Some students may not engage, some may invest more 'effort' than others. •Students are sometimes resistant to groupwork – but if the assessment if purely formative concerns about 'marks' being influenced by other 'free-loading' students can be ameliorated.	across the semester. Some up-front design of problems, materials/resources is required. • In the Heriot-Watt example, students submitted an exercise every other week and got formative feedback the following week. All members of each group handed in an assignment every time. Each was looked at briefly and evaluated at Pass/Fail level and one from each group was selected for detailed feedback. Tutor visited each group to provide verbal feedback on each of the submissions.
18	**The 3-2-1 Discussion** **3** - Things you found out about the topic. **2** - Interesting things about the topic. **1** - Question you still have about the topic. (This gives students a chance to summarize some key ideas, rethink them in order to focus on those that they are most intrigued by, and then pose a question that can reveal where their understanding is still partial or vague.)	• The whole 3-2-1 exercise can be done in 'real-time' in class, or can be set as a small exercise to be completed in time for discussion at the subsequent class session. • If students send their 3-2-1 points to the tutor, the tutor can then draw on them to structure the class session/seminar. • Experience indicates that this is highly effective in engaging students since the discussion is based around their own ideas, the information they have	• This is a proven form of formative assessment with a long history of successful application in schools. • It is student-centred and student-led. The students' 3-2-1 points can inform the entire structure of the class or the subsequent class session. • It is easy to set, and the tutor acts primarily as a 'facilitator' in the class session built around the 3-2-1 points. • Where students 'flag' things they are unclear about, it provides the tutor with an opportunity to 'target' these areas effectively prior to completion of an exam or summative assignment.	Very few disadvantages to this kind of exercise – except that, of course, it does require appropriate allocation of time in class/seminar.	• **Neutral assessment** – in the sense that the exercise is simple to set, requires no written feedback from the tutor, and involves no 'marking' as such. All feedback, guidance is provided orally in class.

		found, and the question(s) they flagged.	• Students share their 3-2-1 points. This can be done anonymously so as to avoid any self-consciousness, anxiety or potential 'loss of face'.		
19	**Question Time Debate (from Norwich)** Students are required to prepare an evidenced response around a particular question or statement in the format of BBC Question Time. In small groups, students have 5-10 minutes to present their view and argument. This is then followed by wider discussion and questions from the audience. And then other views/arguments are presented. Students also submit a 1-sided hand-out with the key substantiated arguments.	• The lecturer or students can create the questions and statements; • Some guidance for the types of 'questions from the audience' to ask supports students to generate open questions; • Students can be given the role of summarising the key features of the discussion at the end of the debate.	• Students have the opportunity to practice and rehearse the key arguments regarding particular concepts and issues; • Students have the opportunity to develop their knowledge and understanding through the use of relevant literature and sources; • Students can develop synthesis of argument and summary-making skills; • Tutors are able to listen to students articulate viewpoints and understanding to formatively assess learning which is taking place; • Tutors can use the opportunity to feed-forward.	• For an effective Question Time debate, tutors need to think of questions from the audience in case students don't develop many; • Students may be unwilling to ask questions and others will dominate discussion so it is important to develop a 'safe' atmosphere for the debate to be held in. It may be appropriate to eastablish some groundrules for the debate.	• **Neutral assessment** – This activity is simple to set and requires no written feedback from tutors. All guidance is provided orally by tutors and peers.
20	**Formative Post-It Notes** This activity is ideal for larger cohorts of students and suitable for lectures as well as seminars. After presentation of information, the lecturer asks students to summarise the concept of the lecture on post-it notes. Crucially, the summary should be approximately two sentences. The lecturer checks over then during a short break/activity and selects a sample of responses. Making sure they're anonymous, they then discuss them, gives a viewpoint and invites students to comment.	• The lecturer is able to informally assess the learning of the students and check levels of understanding; • This method gives students and the lecturer the opportunity to clarify any misconceptions	• Tutors can assess the learning and understanding of large cohorts of students in a relatively short time-period; • Any misconceptions of understanding can be addressed in a timely manner.	•Some students may need longer to absorb the learning and may not like being questioned on the spot. •To overcome this, lecturers can explicitly tell the students that this will feature towards the end of the lecture.	• **Neutral assessment** – this doesn't add to the lecturer's workload – it is simply a matter of changing, in a small way, the use of time in lecturers or seminars.
21	**Work in Progress (WiP) assignments** Students complete two essays. One is submitted mid-semester and one at the	• This activity encourages students to reflect on aspects of feed-forward tutor comments.	• Tutors can assess students' understanding and utilisation of the feedback.;	• Students may not wish to engage with the feed-forward comments.	This involves giving feedback twice, but emphasis on final submission can be on

	• Students have the opportunity to engage in formative/developmental process of essay writing	• It provides students with an opportunity to develop an understanding of the feedback writing process	• Students may not understand the comments so guidance/ intervention needs to be provided so they have the opportunity to ask questions.	tick-box system against learning outcomes (i.e. has student met the criteria?), with detailed written feedback concentrated on the formative assignment (1st submission).
22	**Designing a leaflet/pamphlet** This type of formative assignment requires students to write for a particular audience and this helps students to communicate, and make connections with ideas rather than just feeling that 'nobody really reads it, just lecturers'. In this assignment tutors specify a 'real' audience and ask students to present concepts in a clear and accessible way, and without misrepresenting or simplifying the subject. Generally, this assignment seems to enthuse students and requires them to read around the subject because they are required to fully understand the literature to be able to present it clearly.	• Give the leaflet a 'real-world' setting, for example an audience that they may encounter in future employment. • Tell the students that the best examples will be seen by a wider audience, or used 'for real'.	• Students often greet this activity with enthusiasm as they find it more realistic than the academic essay. • As students have to fully understand the subject matter to communicate it to the lay audience, tutors can see if students have fully understood the topic.	• Very few disadvantages to this kind of exercise, except for the problem that students will engage at various levels and with differing effort input.	• **Neutral assessment** – some thought about the purpose of the leaflet, or a 'design framework' might be required to provide guidance, but generally speaking this kind of assignment should not add considerably to workloads – it could also be used as basis for a competitive element within the group, could promote groupwork etc. An early version might be formative, with more polished version having a summative function.
23	**Test to monitor personal progress** This activity enables students to reflect on their progress throughout their degrees. The same test, which is marked in relation to the standard of knowledge and understanding expected in the final year is given to students in years 1, 2 and 3. The pass rate is lower for students in the earlier years and this enables students to monitor their own assessment journey in relation to the expected standard. This enables students to identify their strengths and weaknesses and the areas they need to improve.	• Guidance needs to be given to students to ensure they understand the standards and levels of the test. Tutors also need to ensure that students understand that progress in terms of the score is expected. • Guidance needs to be readily available for when students have identified their strengths and weaknesses.	• Independently students can monitor their own progress and reflect on their strengths and weaknesses. • Tutors are able to assess students' level of understanding and address any issues with 'performance'.	•Students may not understand the standards and scores so guidance needs to be taken to ensure students do not feel despondent/ demotivated by their scores.	• **Front loaded assessment** – care needs to be taken in the design of the test, and in explaining its purpose to students. Ideally elements may be multiple choice or in short answer format so as to facilitate rapid marking and feedback.
24	**Oral Assessments**	• To promote student	• Oral assessments can be	•Some students may find it	**Front loaded assessment**

	This formative activity draws on the use of individual 15 minute vivas, where the students are asked 'unseen' questions on the topic or wider subject.	engagement, students can be asked to create their own questions as a class and the tutors can select from these.	completed efficiently during a class or tutorial. • This type of assessment means students are given then opportunity to verbally communicate their understanding rather than writing it down like the tradition essay.	difficult to articulate their understanding in this different format so care needs to be taken to ensure they are appropriately guided.	– time and care needed to establish the choice of questions to be asked, but feedback can be quick and immediate
25	**Writing in groups** This activity enables students to work together on tasks rather than in isolation (as they often do when writing academic essays). Students are required to write short pieces about particular concepts and ideas and discuss these in small groups. For example, it could be a handbook on a particular subject. The summative assessment could be to individually write an introduction to the handbook and draw on the short pieces. The second piece could require students to critically reflect on their choices and the process.	• Give students an example of a handbook that represents an authentic document within the workplace.	• Similarly to the previous activity, students feel enthused at the prospect of a realistic activity as opposed to the traditional academic essay.	•Students may not wish to work in small groups and share ideas.	• **Front loaded assessment** – care and time needed to develop the exercise and give it a 'real world' feel and focus. Time then needed to provide feedback to groups and/or the individuals involved.

Appendix B
Self-assessment Checklist for use in Formative Self-Assessment of Scientific Essays/Reports

Below are the criteria that are common to essays. This helps you to see where your writing skills are developing well, and the areas that you can work on in future coursework.

Self -Assessment Checklist					
Tick relevant box to show how well you feel you have addressed the criteria in question					
Structure					
Clear and appropriate use of headings					No clear sections
Title is clear, concise, informative, interesting.					Title is vague and/or dull
Introduction informs the reader what the report is about, Gives relevant background information, Shows why the report is important/of value so should be read Hypothesis/aim/ objectives are clear.					Introduction is unfocused and uninformative. No hypothesis/aim/ objective
Method is clearly and concisely described and layout is clear to follow, referenced where appropriate. Method is appropriate.					Method inappropriate, too chatty, confused.
Result section introduced by stating the key findings Results are clear and relevant, Relevant Figures and/or Tables (additional detailed data in appendix?), Text includes values and reference to Figs and Tables , explains the importance of key results No discussion in this section					Results section has only table/figs Results are unbelievable, No Tables or Figures when there should be No link to data Discussion is mixed with the results.
Discussion is supported by data/refs e.g. by reference to similar work by others, where appropriate. Any shortcomings or problems are acknowledged					Discussion is emotional, biased, unsupported by facts and unconvincing.
Summary/conclusion stands alone to inform the reader of the key points in the report.					There isn't one.
Sections are well balanced and appropriate in length.					Some sections very weak or non-existent.
Overall, the report is well structured Good, logical progression Flows well					Overall, the report is disjointed, no connection between sections.
Tables and Figures					
Figures (includes graphs) correctly numbered with informative captions, Informative, clear, good size, key points are labelled, Scales, key, north arrows on maps as required					Incorrect numbering, poor captions, Figs not used but should have been Figs do not add value, are too small/large/ No scale, orientation, key
Tables correctly numbered (Table 1, 2 etc) with informative captions Data summarised clearly, headings clear units are correct, with uncertainties where appropriate. Correct use of SI units, number of digital places					Tables not used but should have been data inappropriate or incorrect poorly formatted and presented
Data (primary or secondary) are clear and correct, relevant to the aims of the report, Figs and tables referenced in the text and positioned appropriately Captions include ref to data source if					Confused, unclear, gives no confidence to the reader that this is good science. No reference to Figs in the text Evidence of plagiarism

appropriate					
Presentation and style					
Good standard of scientific writing, grammar and spelling					Poor sentence structure, needs spell check.
Report well laid out, correctly formatted, nicely presented					Careless and messy presentation
Refs correctly and consistently formatted in the text,					Inappropriate referencing style
References list correctly formatted					Inappropriate referencing style
Demonstration of level of understanding					
Appropriate analysis					Does not attempt any analysis
Good synthesis, demonstrates an ability to draw together different ideas from different sources that have a common theme but may be discussed from different perspectives.					Confused, concepts not understood, single source of information probably lecture notes.
Relevant background reading from peer reviewed journals and/or texts that are clearly understood.					No evidence that even the essential reading has been done.
Evidence of individual thought, comments and observations show the student is thinking about and evaluating the science, includes own view on validity, strength and weakness of arguments justified and supported with examples/ refs/data.					No observations or comments, or those made are contradictory to the body of the report.
A report on a local topic is presented in the wider context to give a wider field of relevance to possible readers.					Report is confined to the small scale, local study only.
Focus of report					
Report follows and meets Coursework guidelines					Coursework guidelines obviously not read

Source: Gibbs, G., (2010) *Using assessment to support student learning*, Leeds Metropolitan University, p.62.

Notes

[i] Graham Gibbs & Claire Simpson (2002), *Does your assessment support your students' learning?* See:
http://isis.ku.dk/kurser/blob.aspx?feltid=157744

[ii] Susan Davis, Brenda Smith & Kay Sambell, *Can we ever improve feedback without additional resources?*
Northumbria Univ. CETL Assessment for Learning. See:
http://www.brookes.ac.uk/aske/documents/s_davis.pdf

[iii] Quoted in Higgins, M., Grant, F., Thompson, P., and Montarzino, A., (2010) *Effective and Efficient Methods of Formative Assessment*, CEBE Innovative Project in Learning & Teaching, Heriot-Watt University. See:
http://www.heacademy.ac.uk/assets/cebe/documents/projects/innovativeprojects/Effective_and_Efficient_Methods_of_Formative_Assessment.pdf

[iv] Higgins, M., Grant, F., Thompson, P., and Montarzino, A., (2010) *Effective and Efficient Methods of Formative Assessment*, CEBE Innovative Project in Learning & Teaching, Heriot-Watt University. See:
http://www.heacademy.ac.uk/assets/cebe/documents/projects/innovativeprojects/Effective_and_Efficient_Methods_of_Formative_Assessment.pdf

[v] See: http://www.reap.ac.uk/reap/resourcesPrinciples.html

[vi] *Assessment for Learning: 10 Principles. Research-based Principles to Guide Classroom Practice*. Assessment Reform Group (ARG), 2002

[vii] Quoted in Higgins, M., Grant, F., Thompson, P., and Montarzino, A., (2010) *Effective and Efficient Methods of Formative Assessment*, CEBE Innovative Project in Learning & Teaching, Heriot-Watt University, p.5. See:
http://www.heacademy.ac.uk/assets/cebe/documents/projects/innovativeprojects/Effective_and_Efficient_Methods_of_Formative_Assessment.pdf

[viii] See: http://www.ascd.org/publications/books/108018/chapters/Formative-Assessment@-Why,-What,-and-Whether.aspx

[ix] *Re-engineering Assessment Practices in Higher Education*, University of Strathclyde. See
http://www.reap.ac.uk/PEER/Research.aspx

[x] Donna Hurford and Andrew Read, *Feed-forward: helping students interpret written feedback*, University of Cumbria.

[xi] Copies of this publication have been circulated to all Heads of Schools and Assoc Deans for Learning and Teaching for wider circulation within academic staff teams. Copies can also be found at:
https://www.uea.ac.uk/learningandteaching/documents/newacademicmodel/Using+Assessment+to+Support+Student+Learning+-+by+Professor+Graham+Gibbs

[xii] Price, M. (2007), 'Should we be giving less written feedback?' *Centre for Bioscience Bulletin,* No 22. See
http://www.brookes.ac.uk/aske/Perspectives/

[xiii] *Re-engineering Assessment Practices in Higher Education*, University of Strathclyde. See
http://www.reap.ac.uk/PEER.aspx