



Transforming assessment at the module level

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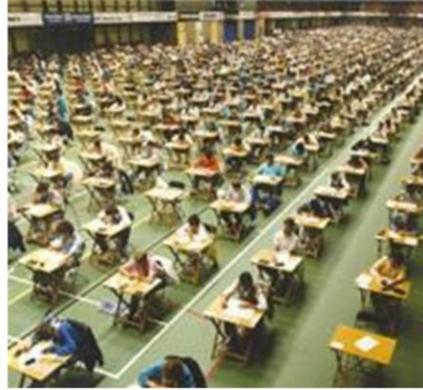
There are a number of good reasons for developing a broader range of assessment methods: greater validity, engaging students, driving appropriate learning, reducing marking loads and improving their inclusivity for an increasingly diverse student population. Above all, there is a strong case for rethinking how our assignments can focus on assessing higher level, holistic learning that is valuable well beyond the purpose of gaining a qualification. This workshop will explore assessment strategies and tasks which are coherent and worthwhile and closely align to programme outcomes. There will be an opportunity to debate and share different forms of assessment including the design of authentic tasks. The intention will be to enable participants to develop concrete ideas for their own teaching responsibilities, whether on academic or professional programmes.

Workshop programme

Three overlapping sections:

- developing authentic and synoptic assessment;
- integrating formative assessment;
- helping students understand assessment requirements.

All involving plagiarism-unfriendly examples



And lots of chance to consider these ideas in relation to your modules

Ideas about assessment change suggest, first that staff have got to be persuaded about the need to change, followed by some concrete ideas about what they might do to tackle issues that have been raised. I don't know whether you have been persuaded of the need for change, but I am going to focus on concrete ideas for doing it. They will fall into three main areas with plenty of time for discussion.

I have linked authentic to synoptic as they are closely linked ideas - ie synoptic is where, instead of checking students have just learnt what is needed for a specific module, we think about how students have to draw on and link learning across their programme. Clearly this is crucial to authenticity as few real world contexts are neatly divided up into separate subjects.

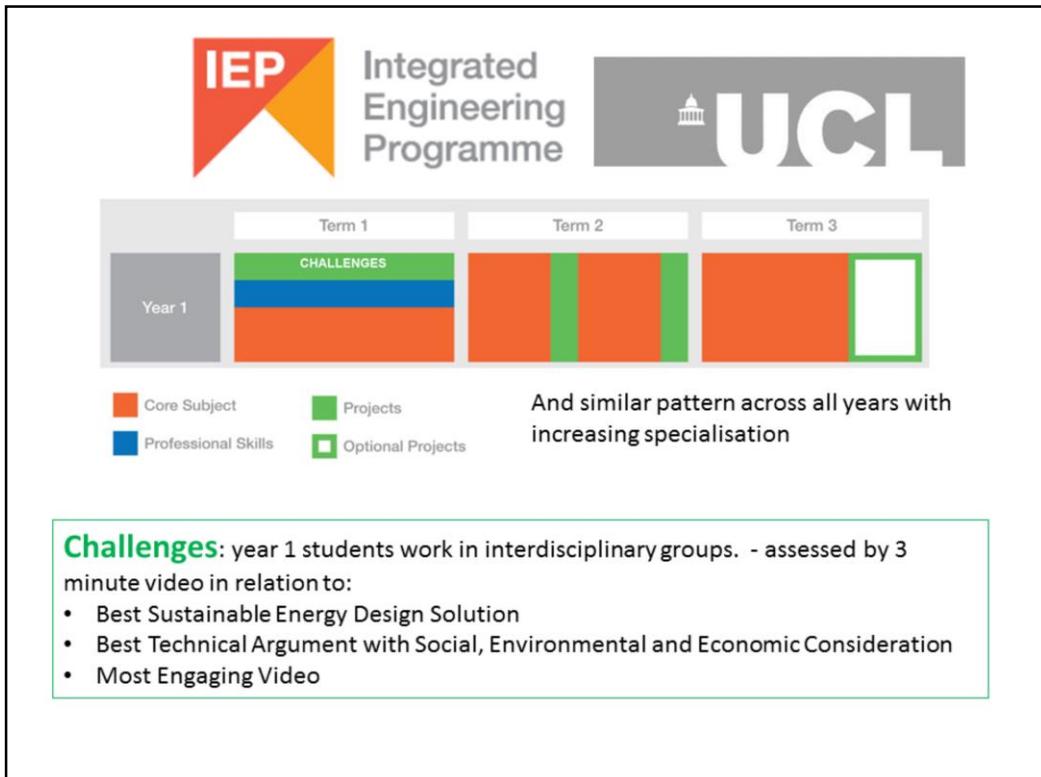
Authentic and Synoptic learning

- Promotes productive, worthwhile approaches to learning (unlike exams), encourages higher order learning (Sambell et al, 2013)
- It creates assessment which is inherently meaningful, interesting, relevant and has long term value (Sambell et al, 2013)
- Can focus on programme learning outcomes and assist students to integrate learning from different modules at each stage of their course



-listen to students talking about their scenario-based learning on the [University College integrated engineering programme](#)

I intend this workshop to be really practical but I can't resist one slide saying why we should develop more authentic and synoptic assessment methods



This is an example of a module which challenges students right from the start of their programme to see their learning as real and relevant. It is an excellent example of a synoptic assessment even though students do it right at the start of their course.

At regular intervals throughout the degree, students from across the faculty come together to engage in interdisciplinary research and design projects.

We want to produce engineers who understand the context of their work, are independent and self-directed, and have an impact in their field. Our integrated framework offers discipline-specific, accredited programmes, while bringing students together for a broader range of interdisciplinary activities. Alongside this, transferable professional skills such as communication and ethics are taught using real world examples tailored to each subject.

This approach to learning will produce well-rounded graduates with a strong grasp of the fundamentals of their discipline and with a broad understanding of the complexity and context of engineering problems. Throughout the programme we have a major emphasis on design activities; developing the skills needed to design innovative solutions and technologies.

Integrated Engineering (also referred to as The Challenges) lets first year students put engineering knowledge into practice through interdisciplinary and design-centered project-based learning experience. We want to give students an awareness of an engineer's influential role in the 21st century and an understanding of the impact associated with engineering decisions.

At UCL Engineering, we give our students the opportunity, right from their first day, to participate in all aspects of teamworking, professional practice and design. This course consists of two major five-week design challenges, intrinsically linked to authentic Global Challenges, rich in social awareness and ethical context. Design workshops replace lectures, allowing all students to participate in modelling, testing and making prototypes of their engineering solutions. Design reviews, meetings, presentations, portfolio management and technical writing are all part of this project course, intended to give students insight into the regular practices found in industry.

Year 1

CHALLENGE 1: SUSTAINABLE PLANET

The brief for the first five-week challenge is very simple;

"Define 'sustainable energy' appropriate to your assigned country. Design a suitable 21st century Sustainable Energy Solution for the benefit of those who live in that country."

You will be supported in this process to put your learning into practice by working in a collaborative, interdisciplinary, community based and human-centred design focused learning environment. At its core, is the deliberate attempt to make use of and explore the creative and stimulating aspects of design as practiced by 'real' engineers and computer scientists in industry.

Assessed in relation to:

Best Sustainable Energy Design Solution

Best Technical Argument with Social, Environmental and Economic Consideration

Most Engaging Video

Year 2

CASE STUDY: HOW TO CHANGE THE WORLD

During two intensive weeks of activity, a variety of global organisations present second-year students with challenge problems. Working in multidisciplinary cohorts and groups, students devise – and where possible, prototype – creative solutions to these challenge problems. Along the way, a programme of themed lectures, facilitated workshops and group studio time will provide training and spur creativity. This programme, developed with the Department for Science, Technology, Engineering and Public Policy, moves through the themes of How to Change the World – Sustainably, Equitably, and Collaboratively – and exposes students to skills for mobilising change through business, public policy, and social change.

[Read more about How to Change the World >](#)

Authenticity: Law

- ▶ Student teams 'become' partners in a law firm.
- ▶ 3 weeks working on contract cases – each team representing one side in the dispute
- Teams negotiate towards settlement posting their claims or defence against the claim on VLE
- Tutor e-moderates the discussion, responding with comments, questions and sources for further investigation.
- Finally, each group presents the legal basis for their claim or defence to the class which is tutor assessed with peer feedback.
- Students' individual mark depends on peer assessment of group contribution.



You can find a detailed description [here](#).

Focusing now on authentic assessment in specific modules –

A law tutor has introduced a simulation of an aspect of legal practice where student teams negotiate towards settlement of a dispute as if they were partners in a law firm. They spend three weeks working on these cases, posting their claims or defence against the claim on a group discussion page on the module's site within a virtual learning environment. The tutor e-moderates the discussion, responding with comments, questions and sources for further investigation. At the end of the period, each group presents the legal basis for their claim or defence in a classroom session. The student audience, working in threes, is asked to discuss the claim or defence and identify two strengths and two weaknesses of the legal argument adopted which are fed back to the presenting group. Each group assesses individual members' contribution to the team's work. The module tutor gives the presentation a mark which is altered for each member of the group depending on their peer assessment. The latter often, but not always, indicates that everyone should get the same mark.

Authentic assessment in English Literature

Year 2/ level 5 English Literature degree

- Students asked to visit a cultural heritage site of literary significance (e.g. Home of Bronte sisters).
- They examine the way in which the writer and their work is presented for a contemporary audience through analysis of marketing material and through dialogue with staff about curatorial decisions.
- In the light of this research, students design a web resource for the site aimed at 'A' level students about a specific element of the author's work (Bradshaw, 2006).

Learning from real cases: built environment

- Health and safety management module
- Assessment: research, prepare and deliver a presentation on a real-life accident that students find and research (last 12 months prevents plagiarism!)
- Presentation (could be a report) to include relevant regulations, codes and guidance; good management practice for the hazard; and create a hazard control risk assessment.
- Relevant for work; sharing with other students provided useful learning about other hazards and their safe management. (Sambell et al 2013; 23)



Childhood & families: serious case review



- Used a real case study involving the death of a teenage mother;
- Students each allocated to different professional groups e.g. social worker, health visitor, police;
- Weekly out of class meetings in their professional group to discuss implications of 'lectures' to their role and the case;
- Assessment:
 - role play of a fictional case conference held two weeks after the baby was born. Each student has 5 minutes contribution to the meeting from their 'professional' perspective: analysis and interventions to safeguard the baby;
 - 1250 word reflective essay on the experience
 - 750 word case conference report
- Case conferences assessed by two observers.

Ref: Harvey &
O'Brien 2017

Large cohorts involved 160+ students. Final year course. Cumbria University, Tutors Tina Harvey and Rhona O'Brien

Motivation was avoiding marking 160+ 4,500 word essays. Wanted something more authentic. Course on 'Multiagency working in safeguarding and child protection'

Involved a change in course and teaching approach.

The case study was regarding the death of a 14 year old girl who was the baby's mum. She was murdered by her boyfriend who was 16, the father to the baby.

Although there was considerable resistance to this when it was introduced, particularly working in groups, the lecturers persisted because of the value to the students of the authentic experience and developing their teamwork and communication skills. In the end, the students were extremely positive about the experience after the case conference. The students became very involved in the life of the baby concerned.

Main issue in taking it forward is ensuring the depth of learning/ critical thinking of the students.

Discussion

Talking with subject colleagues

- What aspects of our existing assessment methods are authentic and synoptic;
- Should we be trying to make more assessment authentic and synoptic;
- Can we draw on any of the examples in the presentation?

Note on a flip sheet 1-3 ideas about developing assessment in your modules



Tutor friendly formative feedback on written work

- Tutor posts good examples of completed tasks on Blackboard
- Students peer assess tasks using assessment criteria
- Tutors give feedback on work in class
- Tasks are done on-line (MCQs), auto marked giving immediate feedback – maybe useful for technical knowledge
- Tutors put main effort into marking drafts (agreed with examiner), just checking for change and putting mark on final piece

Peer assessment of lab reports in pharmacy

- Weekly reports – big marking load, little improvement over term.
- 1st week, students marked exemplars of mixed quality followed by teacher explanation
- Thereafter, 1st 15 mins each session, peer marking of reports and immediate return. Tutor moderated a sample – students accurate or tougher!
- 20% increase in marks
- More effective for learning than tutor feedback

Gibbs (1999)



Let's look at some examples.

Here is a more explicit use of formative assessment in teaching.

Students develop understanding of quality in analysing and reporting science

Higher order learning, focus on the science rather than a description of the process

Students involved in assessment

perhaps this approach was more likely to be successful because of the repetition and amount of feedback involved (both from others but also in seeing multiple other students' efforts). This may explain the increase in marks in pharmacy compared with Yucel although there are real problems with the Yucel marks as their project was also undertaking a parallel activity in improving marking which may have had an effect on the markers' standards.

Patchwork text: example from English

- Aim to improve students' reading, critical thinking and writing about tragedy in drama
- Provisional and exploratory patch writing weekly, e.g:
 - 500 words: any Greek element you find 'alien' / fascinatingly strange
 - 500 word pen portrait of a character you sympathise with/ feel for/ understand
- Patches peer reviewed and discussed in class
- final assignment: a piece of critical-reflective writing which 'stitches together' - reflects on and records the processes of coming to a critical understanding of the field – (used as the basis for revision for final exam?)
- In most cases, patches are submitted as an appendix to the final piece.

Parker, 2003



In this example from the teaching of Greek Tragedy at Cambridge, the tutor wanted to open up and develop the students' responses and thinking about the characters, drama, whereas working on essays tended to close down and control critical thinking about the texts. She wanted to 'disintegrate' the critical reading process, encouraging response, criticism, appreciation, contextualisation – interaction with each other and with the texts. Reading from the texts and applying to them.

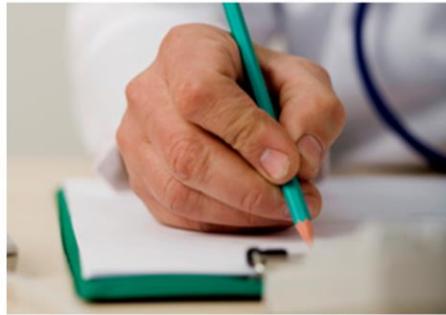
These activities were designed to give confidence to try new ways of reading, writing and thinking.

In the Cambridge setting, the students have to be assessed by an exam. In this case they were provided with open questions and the final assignment was the way they brought their understanding, knowledge and response of the subject together in order to answer those questions.

In most cases, the final assignment would also be the summative assessment of the course -

3rd year Medicine: developing research proposals

- Task is to create 1200 word research proposal in an area of medicine chosen by the student;
- Supportive lecture series on doing medical research available;
- Students submit first draft, part way through, to VLE – sent anonymously to two students for comment;
- Summative assessment is final proposal plus brief record of response to peer review.
- Final 'package' to be checked also includes draft proposal, both peer reviews, the student's own reviews of other work



Whilst the task is fairly short to mark, it involves the student in considerable learning activity – the subject matter for their research proposal and previous research findings, research methods, ethics, etc.

It also involves them in authentic writing of the sort they will have to do as doctors. It helps them learn to write concisely.

The assignment also builds in peer review as a key way of providing feedback at a time that they can use it and are likely to act on it.

Reviewing other students work makes them think about the assessment criteria and helps them develop strategies for improving their own work.

Engagement in learning through formative/summative e-assessment - engineering

- On-line questions (different values for each student) provide instant feedback
- Feedback doesn't give answers but points out where they went wrong
- Students allowed multiple opportunities to correct errors. Summative mark is average of first and last attempt mediated the number of attempts
- Students can ask questions if struggling
- Students very positive about learning benefits
- Unique questions reduced plagiarism
- Reduced marking load – tutors could focus help on those who struggled

Jiao, H (2015)



A total of 48 assignment questions have been developed for the five units. The eTutor program provides instant feedback about where students went wrong and allows them to correct any errors and resubmit. A variety of assessment strategies were integrated into the eTutor system including: giving students multiple submission opportunities, offering instant feedback, answering student questions, encouraging students to correct errors and receive award marks. Students' questions were sent to the lecturer by the program and answered by the lecturer through emails or during a lecture. A feature of the program is the generation of unique questions (with different values) for each student, aiming to enhance independent learning and reduce plagiarism.

the program that uses equation (3) for score calculations.

$M_n = Mn \cdot 1 - mn \cdot 1, n \geq 2 \quad (3) \quad n$

where M_n is the score achieved after n times submission attempts and mn is the mark obtained in the n th attempt. Equation (3) applied the strategy that continued working on the question through genuine learning effort would improve the final mark.

Online submission of assignments through eTutor has been regarded as one of the best aspects in unit evaluations by students. over 70% students agreed or strongly agreed that eTutor has increased their learning interest and helped them study the unit content.

the system was very effective and efficient • students had immediate response
 • instant feedback was super helpful.

Another important theme was about students' independence working on the assignments. The unique questions for each student have efficiently enhanced independent learning and reduced plagiarism. Comments include: The online assignments force me to learn by myself. Assignments were unique, therefore no copycats.

They found that students were putting considerable time into trying to correct wrong answers and were more likely to seek help from a tutor if they couldn't resolve problems compared to traditional submission of assignments. allocate more time with those students who need more help, especially those who are identified as at risk by eTutor. The e-assessment program and the assessment strategies have motivated students in independent learning and resulted in improved performance as shown in figures 4(a) and 4(b).

For each submission and feedback cycle, students were encouraged to make notes about the errors they made and to summarise whether the errors were due to their carelessness or lack of understanding of the unit content. It was observed that these notes students made had helped them avoid repeating similar errors in subsequent assessment tasks. It helped students find their specific weakness in a unit so that similar errors could be avoided in the summative assessment.

It was found that students spent on average an extra 50 minutes after their first submission attempt to correct errors. The motivation of students' action on feedback serves well in improving student's understanding of the unit content that leads to improved overall performance. The e-assessment program freed academics from the marking load and allows teachers to provide more specific feedback to students who have special needs.

Jiao, H (2015) Enhancing students' engagement in learning through a formative e-assessment tool that motivates students to take action on feedback* Australasian Journal of Engineering Education 2015, Vol. 20 Issue 1, p9-18.

School of Engineering and ICT, University of Tasmania, Hobart, Tasmania

Date: March 1, 2015

Dividing Group Marks

[Level 2 PBL module in bioscience]

- Students work in the same groups of a maximum of 5 students per group. A different Chair and Secretary act for each topic.
- Students are given a 'problem' related to a specific topic and allowed 1 hour to work as a group on defining the problem, what they already know and what they need to find out.
- They submit a completed Template [1] giving this information to QOL before leaving the class.
- Outside the class, students work individually on the information they need to find out and submit a second template [Template 2] with this information before the next session.
- The second session allows the students 2 hours to discuss and agree the outcomes for the problem using the information they have found out individually and they submit a group Template [3] to QOL at the end of their discussion.

Dr Karen King, QUB

Group working with assessment weighted towards individual student work.

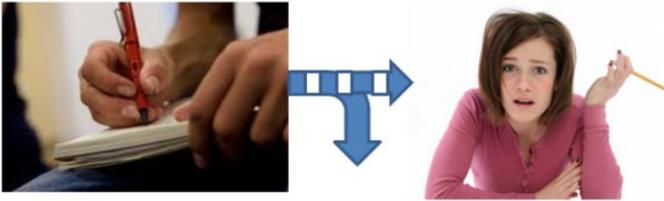
The assessment profile:

- Template 1 – group – formative feedback within 24 hours.
- Template 2 – individual – assessed and mean mark of these elements = 60% of module mark.
- Template 3 – group - assessed and mean mark = 20% of module mark.
- [Remaining 20% from practical and other reports]
- The approach supports the group working by ensuring students have prepared for group meetings.

Discussion

Talking with subject colleagues

- What opportunities do our students receive for formative feedback?
- Can we draw on any of the examples in the presentation to embed formative feedback in our teaching and learning?



Add 1-3 ideas on embedding formative feedback to your flip sheet.

What we say and what we do

What our guidance implies

We can make standards explicit

Criterion-referenced grading

Analytical judgement

There is a 'right' mark

We struggle to communicate the reality of our professional judgement in a way which is understandable and credible to students?

Reality of academic judgement

Markers' standards are internalised and tacit (difficult to express)

Norm-referencing of judgement needed/ interpretation of criteria

Holistic professional judgement

Marker variation



Bloxham (2012)

Developing understanding of assessment requirements in music

- 5 assignments (16th Century counterpoint) – best 4 count
- Group work correcting and grading two model answers;
- Grading used by students to compile a list of assessment criteria;
- Applied these assessment criteria to their own work using a self-assessment sheet, handed in with work;
- Repeated 1 & 2 above in advance of exam;
- There was a significant increase in grades across the board
- There was an increase in engagement and participation in class, students gained confidence in their abilities;
- Students became more self-critical, they learned a lot from other students
- Classes were more fun and enjoyable!

Hood 2012



Hood, A. (2012) Whose responsibility is it? Encouraging student engagement in the learning process Music Education Research, 122, iFirst article

Optional second-year undergraduate module in the sixteenth-century counterpoint writing, with approximately 85 students, 5 assignments, 4 count plus an exam. I really wanted to communicate the principles underpinning these assessments more quickly and efficiently so that I could reach the weaker students but also not lose the attention of the stronger students by going over and over them in class. I am committed to bringing about an improvement in my students' engagement with their music studies. I think that involving them in assessments will go some way towards creating an environment where the students feel that they have some level of input and power over their own learning; becoming less passive and improving their sense of confidence and engagement with the subject.

Firstly, after the first poor assignment, she looked through them and noted common errors. I then compiled these onto a handout and went over these common errors in class. I then worked through some examples with them on the whiteboard and gave them examples to do in class based on these. I invited questions one-on-one and the questions were continuous. As a result of these poor assignments and the involvement of students in questioning, she adopted the following approach.

I gave them two sample answers including typical mistakes and ask them to correct them in groups (and to suggest a grade). I then asked them to compile a checklist of things to avoid or watch out for as well as a list of things that make a good assignment based on this experience. We used these lists as the basis for our criteria and self-assessment sheet.

The reason I did this stemmed from my belief that it would be better for them to experience the criteria applied 'in action' (in practice) rather than 'in theory' (simply focusing on the rules), and I hoped it would improve their grades as a result.

Note that she got students to identify places they were losing marks that weren't in their criteria and amended the criteria to fit – ie making them closer to her actual marking judgement and helping students get a better understanding of marking.

In preparation for the exam, divided the class into groups of 4-5 students and gave them sample essay-type exam questions. I decided on this action based on student feedback that they wanted more practice on these kind of questions and because I wanted to see if adopting the same approach to developing assessment criteria might work on essay-type exam questions. I compiled their answers onto four files (one for each of the main topic areas in the exam) and posted these on moodle. I hoped it would provide a good study guide and focus their attention on exam preparation. I also hoped it would increase their confidence in that they would feel more prepared and

know what I might be looking for in answers to exam questions.

At the end, virtually all students responding to the in-class questionnaire said they found that developing assessment criteria within groups and applying self-assessment to my work helped my learning and improved my confidence in the subject. Students claimed to find the groupwork enjoyable and beneficial.

Positive outcomes

There was a significant increase in grades across the board.

There was an increase in engagement and participation in class.

Classes were more fun and enjoyable.

Students seemed to gain confidence in their abilities and in relation to the exam.

Students became more self-critical.

They seemed to learn at a deeper level and retain the information for longer.

I found I did not have to repeat myself so much in class.

Group work and increased responsibility is socially beneficial and practical for future work environments.

Scientific reports

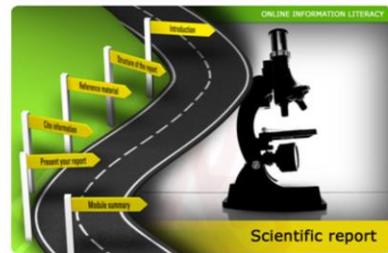
- Biological sciences
 - Students mark two exemplars of a scientific report – one high & one medium standard
 - Student discussion about marks given and justification
 - Tutor tells and explains actual marks
 - Followed by students peer reviewing each others' draft assignments
 - Extremely positively evaluated by students – increased confidence & reduction in anxiety
- Yucel et al (2014)



Bioscience exams

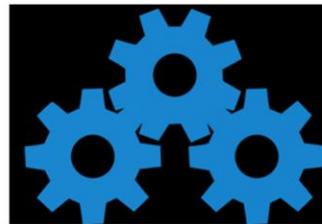
- Biological sciences- 12 modules
- UG & PG students provided with exemplar answers on VLE – average, good and excellent standards
- Exemplars annotated with markers comments
- Students accessing exemplars had improved marks
- Students and tutors positive
- Strongest effect found in large classes
- Particularly useful for students studying other subjects

Scoles, Huxham, McArthur 2013



General benefits of exemplars

- Students & staff very positive
- Enable students to better grasp overall quality, structure, language, style than lists of individual criteria;
- Contributes to confidence to tackle assessments;
- Evidence of improved marks across different ability levels;
- Encourages holistic judgement;
- Helps students recognise different 'expressions of quality'.



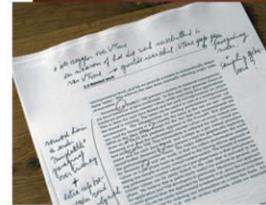
Importance of active engagement

- Marking exercises and structured discussion contribute to helping students learn from exemplars;
- Force students to think about standards - helps build their tacit knowledge;
- Expert explanation/ annotation following marking exercise helps to make criteria 'concrete' – makes standards visible;
- Marking exemplars removes 'emotionality' of peer review.



Copying?

- Exemplars should not be model answers which invite 'mimicry';
- Exercises should encourage questioning and critique of exemplars;
- Experiments avoided providing outstanding exemplars;
- Studies show no evidence of copying exemplars.



Creating exemplars

- Use work similar to that produced by students at that level – range of standards;
- Multiple examples of same standard to recognise multiple ways of achieving quality;
- Short examples which focus on ‘archetypal problems’ or ‘good practices’ may be more useful (Handley & Williams 2011)



Task

Working in groups

- Select an aspect of assessment in your subject that you think could benefit from some development.
- Look at the ideas on your flip chart and identify proposals for change.
- Particularly think about assessment tasks which:
 - Are synoptic: contributing to programme level outcomes;
 - Are authentic;
 - Embed formative assessment;
 - Help students understand the criteria.

Be prepared to present your assessment plan to the group



Assignment Brief Communication

<http://assignmentbriefdesign.weebly.com>



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