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ASSESSMENT AND LEARNING: IS IT TIME TO RETHINK STUDENT ACTIVITIES AND ACADEMIC ROLES?

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> 'Learning is so driven by assessment that the form and nature of assessment often swamps the effect of any other aspect of the curriculum.'
>
> Boud (1990, 103)

> '[our institutional]... assessment procedures still share many of the characteristics of … centuries old examinations …
>
> Is it simply the case that the dominant paradigm and practices [remain] unquestioned because they are assumed to be agreed upon by the education community?
>
> ... The system of beliefs, values and purposes in which the agents involved are participating is rarely discussed.'
>
> Delandshere (2001; 119-121)

ABSTRACT

Traditionally, assessment has been seen as something done by academics after the teaching and learning takes place. In this paper we argue that it is timely to rethink our approach to assessment, and who is implicated in the acts of judgement which lie at the heart of both

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formative and summative assessment. Assessment is more likely to lead to valued learning if some of the judgement employed belongs to students, and not just the academic-teachers (Boud, 1990; Nicol and McFarlane-Dick, 2006). Through two case studies, we illustrate how the development of students' skills in assessment and especially self-assessment can become more prominent in our curriculum and learning objectives. Our experiences suggest not only that student learning can be enhanced in this fashion, but that there are efficiency gains for teaching academics too: outcomes that become especially important as we seek ways to overcome the challenging expectations experienced by modern-day academia.

Keyword: *Assessment, self-assessment, teaching and learning, curriculum and learning objectives.*

EVALUACIÓN Y APRENDIZAJE: ¿ES YA EL MOMENTO DE REPLANTEARSE LAS ACTIVIDADES DEL ALUMNADO Y LOS ROLES ACADÉMICOS?

RESUMEN

Tradicionalmente el profesorado se ha encargado de realizar la evaluación una vez que se ha producido la enseñanza y el aprendizaje. En este artículo hacemos algunas consideraciones que creemos oportuno presentar acerca de nuestro enfoque sobre la evaluación y sobre quiénes están implicados en los momentos de valoración que se consideran punto clave de la evaluación formativa y sumativa. Es más probable que la evaluación produzca un aprendizaje de más valor si algunos de los juicios empleados provienen de los estudiantes y no de los profesores (Boud, 1990; Nicol and McFarlane-Dick, 2006). En base a dos estudios mostramos cómo el desarrollo de las habilidades de los estudiantes en la evaluación y, concretamente, en la autoevaluación puede tomar más protagonismo en el currículum y en los objetivos de aprendizaje. Nuestra experiencia sugiere que no sólo se puede mejorar el aprendizaje de los estudiantes de esta manera, sino que los profesores también pueden ganar en eficacia. Se trata de resultados que cobran relevancia conforme intentamos encontrar formas de superar las expectativas que suponen un reto y que experimentan los académicos hoy en día.

Palabras clave: *Evaluación, auto-evaluación, enseñanza y aprendizaje, currículum y objetivos de aprendizaje.*

INTRODUCTION

The word 'assessment' brings to mind many things. The end of year exam: '*OK. You have 3 hours starting now. You may begin*.' The during-semester essay: '*The concept of natural justice is an unobtainable ideal. Discuss.* (Limit 1500 words).' The in-class multiple choice or short-answer test. Probably all of us at some point have encountered instructions of this sort, and the memory evoked of this student perspective on assessment is often, at best, mixed. Frequently the experience was one to be endured. The necessity was to 'grin and bear it', to 'get on with it', to 'persevere and hopefully get through'. Yet, as this last remark implies, the implications can be profound, long-lived, career-changing even.

For most of us now, the boot is on the other foot. We now find ourselves responsible for the design and conduct of assessment. We are the architects of the way that

students taking our course will be given feedback and graded. But the juxtaposition of the powerful insights offered by Boud and Delandshere cited above in the context of university education suggests there is much we can, and need to, do in our courses and institutions if we are truly to honour our claims of offering a 'higher education'.

What is assessment, and how do we go about it?

When asked to think about assessment invariably our thoughts turn to marking and the determination of the grades that are to be communicated to students (or more widely) – an act typically known as 'summative assessment'. Formative assessment, by contrast, is concerned with feedback for further learning, and traditionally is experienced by students as in-class tasks or homework activities undertaken part-way through a course of study. Taras (2005, 468) makes the important point, however, that to be most effective, the feedback function of formative assessment requires a prior evaluative judgement:

> '...for an assessment to be formative, it requires feedback which indicates the existence of a "gap" between the actual level of the work being assessed and the required standard. It also requires an indication of how the work can be improved to reach the required standard.
>
> ...
>
> It is possible for assessment to be uniquely summative where the assessment stops at the judgement. However, it is not possible for assessment to be uniquely formative without the summative judgement having preceded it.'

Nowadays most courses comprise a variety of student activities that will play a formative role, with many also contributing towards the final grade (e.g. the in-course exercise or essay, which earns a mark that contributes a designated portion of the final grade). If we accept Taras' argument highlighted above, then all such activities will entail an act of judgement: 'a judgement which encapsulates all the evidence up to a given point.'

With the rising prominence of continuous assessment, in-course assessment activities are the sites where students rehearse the sort of skills we would value them developing; where they 'perform their understanding' as John Biggs (2002) puts it. In a constructively aligned system these activities will be designed to ensure that the intended learning outcomes are addressed (Biggs, 2002). In this sense the assessment *is* the curriculum.

Who does the assessment?

Traditionally, the expectation is that academics do the assessment. After all, they are the subject experts, and arbiters of academic standards. But, with the trend to a greater diversity of assessment activity just noted, and with student numbers increasing, how realistic is it to expect teaching academics to continue to undertake all of the assessment, and to do so in a thorough and considered fashion? Is there room to draw students into the assessment process more explicitly than has traditionally been the case, with

consequent benefits for them as well as for the teacher? The shift to inserting more assessable activity much earlier in a course gives rise to an opportunity for achieving crucially important formative feedback in a timely way: a chance to work with students to ensure they are more securely on track earlier in a course.

In this paper, we hope to challenge those who have the academic authority and power to re-think the assessment process, the roles we adopt as teachers, and the nature of the activities we ask our students to undertake. We encourage teaching academics to ask:

- What opportunity do I have to rearrange things so that I do less of the actual assessment work myself (but rather enable my students to do it instead) and I act more as the agent for quality control in this process?
- What can I try that I could expect to yield learning gains for the students and workload efficiency gains for me?
- What do I need to attend to in order to be confident that any such experiment will be successful? (and what are my criteria for success?)

We explore these questions through two case studies. Our focus is on practical possibilities for drawing students more explicitly into key aspects of the formative assessment process in such a fashion that their learning is enhanced and the demands on the teacher are moderated. First, however, we outline a framework to guide our thinking.

ASSESSMENT FOR FEEDBACK: A FRAMEWORK FOR THINKING

As we suggest above, there has been a significant shift in recent decades to conceptualise learning as a process whereby students actively engage with the subject matter, and construct and internalise new meanings in collaboration with others (teachers as well as peers) (e.g. see Biggs, 1999; Brockbank and McGill, 2007). This is matched by a shift away from the passive and simplistic notions of teaching as 'transmission' and learning as 'acquisition' (e.g. Barr and Tagg, 1995). Such shifts have profound implications for how we think about feedback, and what constitutes a 'well-designed' or effective system of feedback provision, as Nicol and McFarlane-Dick (2006, 200) have argued. When we think about learning in this way, we are prompted to ask: What is it that we want our students to be able to do? What opportunities can we provide for them to rehearse the sorts of skills we would value them developing? and How will they come to know how well they are doing? A historian will be equally as concerned with what it means to 'do history' (i.e. for their students to become effective practitioners in history) as a rheumatologist wanting to ensure that the medical students in their care can conduct an acceptable examination of the hand (see Trevitt, 2008). In other words, the shift to 'active learning' prompts us to think more in terms of capability development, and our interest in assessment takes on a practical bent, even when the subject material is traditionally 'academic' (as, for example, with 'history'). We want to assess the extent to which our students can demonstrate or offer evidence to assure us of their expanding capabilities. This suggests that, to be most effective, feedback should be concerned with the shortfalls that are evident in the current understanding and performance being demonstrated when compared with the standard expected. More formally, feedback can be considered as the provision of 'information about the

gap between the actual level and the reference level of a system parameter [i.e. goal] which is used to alter the gap in some way', according to Ramaprasand (1983, 4).

Appreciating what exactly feedback is, and how it constitutes an integral part of the learning process, is only part of the story, however. For feedback to be effective 'students have to be [en]able[d] to judge the quality of what they are producing and be [en]able[d] to regulate what they are doing during the doing of it' (Sadler, 1989, 121). Effective feedback involves 'assisting students to come to hold a conception of what counts as good quality work in the subject area' and ensuring that we do not 'take it for granted that [our] expectations of academic work …[are] self-evident, that [our] feedback comments [are] transparent in their meaning and import, or that students would know how to remedy any shortcomings identified' (Hounsell et al., 2008, 55-6). In other words, we need to expand our traditional expectations of what we want students to be able to do, and enable them to learn how to, firstly, take an active role in making informed judgements about their own work, and, secondly, debate with us and their peers the meaning of the learning goals, and performance criteria that have been set (or negotiated with students), and the standards expected.

In sum, following Nicol and Macfarlane-Dick (2006, 205) '[g]ood feedback practice is broadly defined ... as anything that might strengthen the students' capacity to self-regulate their own performance ... [and is shaped by] seven principles', as shown in Table 1.

TABLE 1:
SEVEN PRINCIPLES FOR GOOD FEEDBACK PRACTICE (ADAPTED FROM: NICOL AND MACFARLANE-DICK, 2006, 205)

Good feedback practice:	**Symbol (used in text below)**
• helps clarify what good performance is (goals, criteria, expected standards);	NMD-1
• facilitates the development of self-assessment (reflection) in learning;	NMD-2
• delivers high quality information to students about their learning;	NMD-3
• encourages teacher and peer dialogue around learning;	NMD-4
• encourages positive motivational beliefs and self-esteem;	NMD-5
• provides opportunities to close the gap between current and desired performance;	NMD-6
• provides information to teachers that can be used to help shape teaching.	NMD-7

TWO CASE STUDIES: RESTRUCTURING STUDENT ACTIVITIES AND ADAPTING ACADEMIC ROLES

So what, then, are the sort of things we might do, to adapt our assessment (and feedback) practices so that both we and our students might benefit? In this section we present two cases from our own practice. The first is an extract of a teaching portfolio created by an early-career academic working at the University of Oxford (this case is an account of development work undertaken by the second author, EB, as part of a continuing professional learning programme offered by the first author, CT). Written by the second author, this case is concerned with improving first-year undergraduate students' essay writing through encouraging self-assessment prior to submission. The second case is written by the first author (CT) and describes a teaching intervention designed to encourage senior level undergraduates to review and discuss their answers to a mid-semester quiz. It was used for a number of years at The Australian National University, Canberra (Boyle and Trevitt, 1997). In both cases, the author-teachers aimed to include students in the assessment process by encouraging them to reflect on their answers and to assess their own performance in relation to the required standard.

CASE 1: Essay cover sheets

Essay technique is an important area where students need to be in control of their work, not least as this method of assessment will form the basis of their formal examinations. By being able to complete competent essays that meet the assessment criteria a student is learning and achieving more than just the final words on paper. In order to reach this end point they will have had to research a topic, using a variety of sources, made comprehensive notes and then synthesised the information they have obtained to be able to choose those bits that are most relevant to answering the set question. All of these are valuable learning skills for the student, which will ultimately help them control their own learning.

In order to help students understand what was required of them in relation to essay writing I provided each of them with the relevant assessment criteria, and then discussed this in our first tutorial together, along with their ideas of what made a good essay. I went on to design and use an essay cover sheet (see Attachment) with the aim of getting the students to start critically assessing their own work, in line with the assessment criteria, *before* handing it in to me. My hope was that the combination of assessment criteria and cover sheet would enable them to see what were considered key aspects of their work, and help them to identify where they could improve their technique or approach. As reflective exercises need to be regularly integrated activities (Light et al, 2009) I used the cover sheet with every essay the students had to produce.

First year students need to get the basic structure and general content of essays firmly under their belts at the start of their first term, whereas second and third year students should already have honed these techniques and be concentrating on refining the content of their work and sourcing up to date material to reference in support of their arguments. After the first few rounds of using the cover sheet I evaluated the information that the form was supplying and also sought my students' opinions on the format of the cover sheet and the questions included. This enabled me to use the knowledge I had gained from the first round of the essay cover sheet to develop a new version that better met the objective of providing a means of stimulating reflective learning. A final iteration in the process was that I began to respond to

their comments on the cover sheet once I had graded their essays. I then returned the annotated cover sheet to the students with their essays, allowing them to see whether I thought they had assessed themselves fairly and where I saw discrepancies in our views of their work. The reasoning behind this action was that it would help students answer these sheets more honestly, and would hopefully enable them to fully appreciate the importance of their personal critique, and how they would benefit from engaging in it in an authentic manner.

Findings from student self-assessment

The findings and my impressions of the impact of my 'experiment' in using essay cover sheets (both in relation to the students and myself) are outlined below; the titles in italics refer to the questions which were on the cover sheet (see Attachment).

Rewording of essay titles:

This was a useful exercise as it helped me determine how well the student understood the question they were being asked to address, and whether they appreciated key words in the title such as 'compare and contrast', 'explain' and 'discuss'. This is of key importance in relation to learning outcomes as students will take essay-based examinations. For example, for a Geomorphology essay with the title:

- 'The tripartite division of weathering into physical, chemical and biological types is fine in theory, but in reality it is far too simplistic. Discuss.'

I received the following interpretations:

- 'Examine the extent to which a tripartite division reflects the actual nature of weathering, and whether alternative systems of classifying weathering might be more effective.'
- 'Weathering is classified into physical, chemical and biological processes. Does this apply to most real situations or does it mainly only fit theory?'
- 'Debate for and against the categorisation of weathering into biological, chemical and physical, in the context of alternative forms of classification. All the time showing knowledge about weathering and its categories.'

I found this a really powerful method for understanding a student's viewpoint on a topic, and their interpretation of the work set. The fact that no two students ever returned the same interpretation highlights how individual the learning process is.

The first time I used the cover sheets some students had not filled in this section as they didn't understand what was required of them. This showed me that further explanation of the concept was required: something that I made sure we did together thereafter. After this everyone completed this section. While interpretations of the question varied between students, they generally demonstrated their understanding of the task they were being set. In some cases students missed out part of the question in their response, this then enabled me to look at their essay in relation to what they felt they had been asked, and see if they had fulfilled the criteria as they saw them. I would then point out to them in my comments on their work that they had missed part of the question as it was set. It also highlighted for me the finding of others, that tutor's and student's understanding of the same thing will often be different as they are approached from different knowledge bases and settings, and that these differences are not always appreciated without further exploration (e.g. Lea and Street, 1998).

While most students were able to reword the essay title capturing the full meaning of the question, some still missed parts in their explanations by focusing more on one part of a question than on the whole. This showed me that I needed to provide more feedback to students about the extent to which their interpretation met the meaning of the question, and to give them guidance if I felt their version of the title was lacking. Once students become aware of the value this exercise holds for them, their engagement with it should become more vigorous.

Advice to a friend about what you would do differently, and why:
While the comments here tended to focus on reading and note taking, a range of other themes were also highlighted. For example:

- 'Try to find more sources, especially journal articles etc'
- 'I would suggest that they really concentrate on the title and understand it, as I am not sure that I did exactly. I would also try and include more examples'
- 'It may be a good idea to begin the essay with a brief description of what the cycles entail so as to give the essay stronger foundations'
- 'Read more widely'
- 'Give some graphs, useful for proving a point'
- 'Be clear about a structure for the essay before and perhaps make better use of examples'
- 'I would advise them to refer to the question more throughout and concentrate more on comparisons'

These comments truly show the students reflecting on their approach to learning and identifying ways in which they could improve their learning capacity. I find this a deeply satisfying outcome as a teacher, and hope that the students will go on to employ the advice given to their imaginary friend.

My feedback to students
My comments on essay cover sheets highlighted areas where I agreed with the students' self-assessment and areas where I felt they had perhaps not fully reflected on the content of their work realistically. They were designed to make the student more aware of the importance of their capacity to self-critique, and the seriousness that I gave to this aspect of how we worked together. They were also used to ensure that the students and I were both engaged with and working towards a shared understanding of the assessment criteria. In order to ensure that the comments are having the required effect I would ask students to review them when I return their essays and discuss with me whether they thought my comments fair or not. This is something they proved reluctant to do at first, but by introducing this opportunity towards the end of their first year I hope that in their second year they will be more open to debate these points.

Attachment:

Cover sheet for essays

Name:

Essay title:

1. Please reword the essay stating what you think you are being asked to do:

2. Please answer the questions below yes or no:

Have you answered the specific question set?	Yes	No
Have you avoided inclusion of irrelevant material?	Yes	No
Have you included evidence to support your arguments?	Yes	No
Have you written an introduction?	Yes	No
Have you written a conclusion?	Yes	No
Have you given references and quotations?	Yes	No

3. What did you find interesting/exciting about this topic?

4. A friend has just discovered they have to prepare a very similar essay next week: what advice would you give about what you would do differently, and why?

As implied in the first case above, students who have amassed long years of experience as learners in an educational system where they experience little or no expectation to engage in self-assessment require careful induction if such an innovation is to succeed. The second case, below, is an account by the first author of another such assessment innovation, which made novel demands on the students intended to enhance their learning, but which also yielded (unplanned) efficiency gains for the teacher. The setting is a course in environmental science and management taken by final-year undergraduate students (Boyle and Trevitt, 1997), and while the experience dates from some two decades ago, the underlying messages are even more pertinent now, where the pressure of even larger student numbers challenge us more than ever.

CASE 2: Mid-semester short answer quiz

In an effort to induct students into a shared approach to (formative) assessment, I initiated a mid-semester short-answer quiz, which comprised 40 one-line answer questions worth 50 marks. That is, there were 30 questions for 1 mark each, plus 10 questions for 2 marks. This quiz was subsequently assessed by the students and myself - collaboratively - during an open-forum discussion of model answers. Prior to engaging the students in this open-forum discussion I had them complete the quiz some 2 weeks earlier under typical exam conditions (ie no access to textbooks; working individually; no discussion, etc). At this juncture, as far they were concerned, this was a standard piece of assessment that was then collected up to be marked by me.

On the day we engaged in the open-forum discussion of model answers I returned each of these 'exam scripts' to the respective student author, with the intimation that I had 'marked' it but not annotated the paper in any way (ie I had withheld the 'mark'). The first time I attempted this exercise I had, in fact, done exactly that, but as my experience developed and I gained in confidence using this approach I usually only marked a sub-set rather than all of the scripts. This made the process much more time-efficient, but still provided a check on student honesty and a welcome arbiter for quality control purposes.

With a class of over 70 students and a test script of 40 questions we rarely got more than 1 or 2 questions into the discussion process before someone responded to the effect that: 'My answer is mostly similar to yours, but I didn't say X (or I said Y but not X) – does that mean I get a mark or not? This, of course, usually prompts a powerful formative dialogue, often involving a number of students who likewise have queries about the efficacy of their own answers. Our terms of reference were what, by then, were fairly well tuned course goals, and a much larger suite of intended learning outcomes, along with associated standards (Boyle and Trevitt, 1997). With experience, I became more adept at drawing out other students' perspectives to help arbitrate on a given individuals' inquiry (in terms of these goals, Intended Learning Outcomes, and standards), and we frequently enjoyed vigorous debates. Overall, we were able to deal with all 40 questions fully in a matter of some 100-110 minutes. For mark-

conscious students, there is no doubt this was a most engaging exercise, with essentially everyone in the room involved in active listening, processing of the discussion and, in many instances, coming to their own considered judgement about what counted as viable understanding. Again, as I gained in experience, I would slip into our discussions a reminder that the sort of process we were engaged in was, of course, helping them rehearse exactly the sort of negotiation skills in professional judgement that they would be expected to exercise once they gained employment following graduation.

At the same time, I was learning from the discussion not only about various student capacities to 'perform their understanding' (cf Biggs) but also to argue their case, defend a position and, possibly, to to mount a valid counterpoint deserving of wider recognition. I was also learning about what refinements in the wording or thrust of a given question might be more beneficial to use next time, and why.

During one end of course evaluation, students were asked: *Overall, what do you feel are the best features of the course?* Responses included:

- 'The innovative assessment was an outstanding feature'
- 'Knowing that there is still a lot more to be learnt. Preparing us for the job situations we are seeking. Making us think about things rather then read facts.'
- 'The practicality of the work covered. So many courses feed us [the] textbook which we are expected to rote learn. How is this going to help us when we have to perform in a job? Chris you have made me think critically and taken away some of my fears of what the work force is all about. Thank you.'
- 'Assessment of relevant skills and not just memory.'

DISCUSSION

The in-course student essay and the in-course short answer quiz – the focus of the two case studies above – are well established and common examples of the sort of activities that we all get our students to do in the courses we teach. What is perhaps less common, and exemplified in these two cases, is the extent to which we set out deliberately to engage students explicitly in component steps of the assessment act. In the text below we review the features of each case in terms of the seven principles put forward by Nicol and Macfarlane-Dick (2006, 205). To do this we use the symbols in the second column of Table 1 to indicate which principle we are referring to, and use the line numbers on the left hand side of each case to indicate which part of the text is pertinent (thus, Case1, lines 120-45, refers to the Attachment, for example).

The learning environment in each case is arranged so that students are obliged to self-assess (and reflect) on their work (NMD-1; NMD-2), both individually (Case 1, lines 14-9; 120-45; Case 2, line 23) and in dialogue with peers and the academic teacher concerned (Case 1, lines 12-4; Case 2, lines 4-5; 20-6). Students are supplied with copies of the assessment criteria and standards (Case 1, line 13) and/or model answers (Case 2, line 7) and explicitly prompted to review their own work in these terms (Case 1, line 107-12) and, in Case 2 (lines 6-7), to do this in the presence of a supervising teacher-academic (NMD-1; NMD-2). Teacher and peer dialogue lie at the heart of the engagement process (Case 1, lines 65-76; Case 2, lines 20-33), and the time allocated to these activities allows for specific consideration of learning issues raised by

any given student (Case 1, lines 67-8; Case 2, lines 29-30), according to need (NMD-3; NMD-4; NMD-6; NMD-7).

Rendering the case descriptions in the current form limits the extent to which useful comment can be offered about both encouraging positive motivational beliefs and self-esteem (NMD-5) and closing the gap between current and desired performance (NMD-6). Some hints about encouraging motivation are apparent for Case 1 (lines 35-7) and Case 2 (lines 23-4; 29; 48-54). Likewise, success in closing the gap could be implied for Case 1 (lines 53-9) and Case 2 (47-54). On the other hand, both cases yield substantial suggestions that information to help shape teaching was forthcoming (Case 1, lines 26-31; 45-7; 65-6; 80-1; Case 2, lines 39-54), which is understandable given that each account is authored by the teacher concerned, and that both authors are necessarily involved in the development of themselves as teachers.

Using an essay cover sheet (Case 1, lines 120-45) brings to our attention some limitations (and ways to overcome them) of traditional approaches to the practice of setting and assessing student essay writing, especially in terms of the way it facilitates (or not) the development of self-assessment (NMD-2) and encourages teacher and peer dialogue around learning (NMD-4). On the one hand, as Delandshere (opening quote) and Nicol and Macfarlane-Dick (2006, 200) remind us 'formative assessment and feedback are still largely controlled by and seen as the responsibility of teachers; and feedback is still generally conceptualised as a transmission process'. On the other hand, as Brockbank and McGill (2007, 194) explain, if we view 'the learner as an active collaborator', then this helps us move beyond the simple consideration of essay as assessment *product,* and consider what evidence can be sought about the process involved in producing the product, especially the process of reflection:

> '… it is not possible to record in an essay, presented once, the process of dialogue whereby a student may grapple with an issue, share it with others, and come to some joint understanding of a concept or difficulty.'

Seeking student responses to questions 1 and 4 in the essay cover sheet (Case 1, lines 129 and 144-5) offers a way to gain this evidence, and provides the impetus for the required dialogue and the pursuit of joint understanding (Case 1, lines 45-63; 86-104).

Likewise, when using a mid-semester quiz, by drawing students into an explicit debate about the interpretation of individual responses to short answer questions (Case 2, lines 21-38) the student becomes an 'active collaborator', vigorously grappling with issues, sharing with others, and negotiating joint understanding.

Looking to the future, what can we learn from these experiences, and what might we need to be alert to in our own particular situation? There are three matters highlighted by these cases that bear further consideration: activity design and scalability issues; academic workload; and development support for 'doing things differently'.

Activity design. At the heart of the design process is the extent to which the performance that is valued matches that which is being assessed. As Bowden and Marton (1998; 13) argue 'If you want to earn a driver's licence … you have to learn to drive. …when you are tested: you drive.' That is, '[t]he assessment tasks should

… require an active demonstration of the knowledge in question' (Biggs, 2003, 156). 'Writing about' the knowledge in question may well be a performance that is valued in addition to the capacity to perform that knowledge (notwithstanding Biggs' implication to the contrary). This is one reason that the challenge of assessing how new teachers develop and become established in academia often involves asking them to produce a reflective portfolio rather than (or in addition to) a direct examination of actual teaching performance (Trevitt et al., 2011).

Furthermore, in more and more work settings, our graduates require not only the capacity to 'do the discipline' but to be able to stand outside the doing, and render a realistic account of their 'capacity to so do' (e.g. for job applications; for promotion purposes; as part of contract negotiations, etc). This capacity, therefore, ought to be encouraged and supported in order to help our students to be successful in an increasingly competitive job market – it should be one of the things that a Higher Education offers to its graduates. There is thus a need for the design process to strike a balance across these two related but distinct purposes.

The design process also needs to be sensitive to the numbers of students expected to be involved. The low numbers of participants in Oxford tutorials are in no way representative of most university teaching settings, but the success achieved by Professor Michael Jackson (Case 53 in Nightingale et al. 1996) reassures us that an approach which actively engages students in self and/or peer assessment can be robust and scalable, even as students numbers approach a hundred or more (see Box 1).

BOX 1
EXCERPTS FROM A CASE STUDY OF STUDENT EVALUATION OF PEER ESSAYS IN POLITICAL SCIENCE (CASE STUDY 53 IN NIGHTINGALE ET AL. 1996)

Peer reading and self-evaluation

Concerned to concentrate the attention of students on formative comments, I have adopted the following practice in marking essays in political science classes, ranging from first year courses with 150+ students to honours seminars with 90, and postgraduate courses with 60.

...
The assigned grade will not count until each student completes a self-evaluation. I require that each student read the essay of two peers from the class and then write a three paragraph (one page) appraisal of her/his own paper in light of the other two. The first two paragraphs evaluate the work of the peers and the last is a reflective evaluation of the student's own work. Peer reading is a powerful tactic. It enlarges students' experience in the same way as it enlarges our own as scholars. Students have no idea of the range of work that teachers see, and partly as a consequence, do not understand why grades are distributed as they are.

...

When these self-analyses are submitted, some of the students do such a good job that I revise the grades assigned earlier. The revisions are marginal, but they reward learning. A good reflective evaluation deserving of such reward is one that is honest and has some insight into the process and outcome of essay writing.

Other elements which will contribute to developing independence and the ability to evaluate their own work are:

- Spell out the criteria the essay must meet when it is assigned and repeat them before the self-analysis.
- Require self-analysis before granting an interview to any student to discuss their work.
- Keep some copies of very good work to show to those students who cannot recognise the flaws in their own work .
- Before revealing the grades, offer formative comment to the class as a whole.
- Use class time to teach the process of writing through offering examples of drafts and good revisions, etc.

One of the advantages to working this way is efficiency.

Academic workload. The potential to reduce teaching workload at the same time as enhance student learning is hinted at in tantalising ways in the cases above (Case 2, lines 15-9; Box 1, last line), even if it was not an explicit developmental objective. Further work is required to develop and extend this idea. A key issue, of course, is that any future gains in the form of reduced teaching workloads will inevitably require an up-front investment in developmental design work of the sort we describe. This needs to be much more widely acknowledged and planned for by individual academics and institutions alike. Yorke (2011, 251) makes the point that '…the professional judgement [required in our role as] assessors has to be given prominence, and that this implies a sustained commitment to developmental work at institutional and sectoral levels.' This leads into the third and final discussion point.

Development support. Rethinking our roles and priorities as academics is not only focussed around the preparations for the demands of academic teaching in modern contexts, but also on better understanding our own dispositions as academic teachers. As Biggs (2003, 26) observes, '[t]he kind of atmosphere we create – authoritarian, friendly, cold, warm – can markedly affect the effectiveness [of our teaching.] For example, problem-solving in small groups won't work with a know-all group leader who insists on telling students all the answers.'

The seventh principle of good feedback practice (Table 1) makes clear that in any learning and teaching environment it is not just the student who is learning: the teacher also has to be willing to learn. In our experience orchestrating and conducting CPL activities, participants appreciate and readily acknowledge the role of co-learner that is implied when we acknowledge and make explicit our own role as learners during development work This amounts, in effect, to a practice-based component in the ongoing

continuing professional learning that now is increasingly expected of all professionals in any modern work environment. As suggested by the quotes from Delandshere that we opened with, traditional (but still widely utilised) institutional assessment practices do not typically embrace the sort of meta-cognitive functions that are prompted by Nicol and Macfarlane-Dick's analysis, and that our cases seek to illustrate in practice. Yet, as we hope these cases exemplify, it seems that adapting our approach to assessment may not only benefit students, and their learning, but may well help reduce the burden of assessment experienced by the teaching-academic, thereby helping relieve the seemingly inexorable pressures increasingly evident in academia today. Done thoughtfully, there are potential benefits for both staff and students.

It is noteworthy that in each of the cases discussed the teaching academic concerned was engaged in a purposeful act of educational development. That act was under their own direction and control, but was being supported by specialist educational developers employed by the host institution for that purpose. It seems inescapable that, if we are to continue to achieve and even enhance the sort of educational and productivity gains illustrated by these cases, then institutions should expect to have to invest in the adaptive capacities required.

CLOSING COMMENT

In this paper we have argued that acts of judgement lie at the heart of both formative and summative assessment, and that assessment is more likely to lead to valued learning if some of the judgement employed belongs to students, and not just the academic-teachers. Traditionally assessment is too often seen as something done by academics after the teaching and learning takes place: our argument is that assessment, appropriately re-thought, actually lies at the heart of the learning process – not just determining *what* is learned but also helping to develop students' ability to assess their own learning (cf Boud, 1990). Creating and proving alternative student activities which encourage students to play an active and thoughtful part in determining how well they have 'performed their understanding' (cf Biggs) is key to successful learning-oriented assessment. Developing students' skills in assessment and especially self-assessment needs to become more prominent in our curriculum and learning objectives, and one way to achieve this is by giving greater emphasis to reflective activities such as those exemplified in the cases reviewed here.

The principles of good feedback practice advanced by Nicol and Macfarlane-Dick (2006) provide a sound basis for designing student activities of this sort. Our experiences suggest that the information that 'can help shape teaching' (NMD-7) may take two forms: one to do with enhancing student learning, the other to do with achieving efficiency gains for teaching academics. Further work is required to more fully explore whether investment (by both individuals and institutions) in development work of the sort we describe here can help tackle the seemingly contradictory expectations that are now increasingly experienced by academia, and prompted by rising student numbers, increasing student fees, raised societal expectations, and diminished unit resource (especially personal time).

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