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Learning-oriented assessment: conceptual bases and practical implications

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This paper focuses on the potential of the learning aspects of assessment. The term 'learning-oriented assessment' is introduced and three elements of it are elaborated: assessment tasks as learning tasks; student involvement in assessment as peer- or self-evaluators; and feedback as feedforward. I also indicate how learning-oriented assessment was promoted at the institutional level through a reflective analysis of a major funded project. Implications for practice are discussed through a focus on how learning-oriented assessment can be implemented at the module level.

Introduction

Assessment in higher education faces a number of challenges. Knight (2002) asserts that summative assessment is in 'disarray', for example, in terms of reliability or in judging the kind of complex learning to which higher education aspires. Formative assessment is also said to be in decline (Gibbs & Simpson, 2004) or failing to fulfil its potential (Knight & Yorke, 2003). All assessments lead to some kind of student learning (Boud, 1995), but a fundamental challenge is to stimulate the right kind of learning. Assessment tasks often distribute effort unevenly across a course (Gibbs & Simpson, 2004) and examinations are frequently critiqued for encouraging memorisation or surface approaches to learning (Ramsden, 2003). Assessment may also fail to support students in developing dispositions for lifelong learning, such as the ability to self-evaluate (Boud, 2000). Feedback is often ineffective, principally because it comes too late for students to use it productively (Carless, 2006) and it generally fails to include iterative cycles of feedback and revision that normally characterise academic writing (Taras, 2006).

One of the core problems is that assessment is about several things at once (Ramsden, 2003) or what Boud (2000) refers to as 'double duty'. It is about grading and about learning; it is about evaluating student achievements and teaching them better; it is about standards and invokes comparisons between individuals; it communicates explicit and hidden messages. Assessment thus engenders tensions and compromises. Its multiple demands make its reform difficult to

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achieve, but in view of the centrality of assessment to the student experience, it is crucial that the area be handled well.

This paper seeks to address the issue of how assessment could be more effectively focused on enhancing student learning. Learning-oriented assessment (LOA) represents an attempt to emphasise these learning features of assessment and promote their development. This paper has three main strands. Firstly, I introduce the term LOA and discuss its conceptual foundations. Secondly, through a reflective account of a funded project managed in the Hong Kong Institute of Education (HKIEd), I describe how LOA was promoted at an institutional level. In the third main section, I move to the module level and indicate how LOA can be implemented in practice. In terms of my own lived experience, these three strands interacted as my work oscillated between the wider project management, its emerging conceptual underpinnings, engagement with the relevant literature and my own teaching.

Conceptual basis of learning-oriented assessment

This section describes firstly the genesis of the term LOA in terms of how it originated from challenges associated with the terminology and practice of formative assessment. An initial starting point for our institutional focus on the learning aspects of assessment was stimulated by a high-stakes quality audit with a specific focus on assessment. In-depth preparation for this review led us to discuss differing interpretations, misconceptions or doubts about formative assessment. As Yorke (2003) points out, formative assessment is more complex than it appears at first sight. The different conceptions of colleagues in the HKIEd fell roughly into two camps: one group who viewed formative assessment as mainly involving formal structured tasks, similar to Bell and Cowie's (2001) planned formative assessment. Another group, of a more constructivist orientation, considered formative assessment as mainly informal and ad hoc, what Bell and Cowie refer to as interactive formative assessment. When each party had its own view of what formative assessment is or should be, dialogue was constrained by the fact that individuals were actually talking about different conceptions even when using the same term.

Practical impediments to formative assessment were also raised. Some staff, particularly those that favoured a formal and planned approach to formative assessment, believed that lecturers did not have the time to conduct formative assessments, whilst those with the more constructivist interactive orientation felt that formative assessment was just a fundamental part of good teaching. A further concern was students' responses to formative assessment and in particular whether it may unduly increase their workload burden. Instrumental students may interpret some types of formative assessment as extra work for no marks or regard them as non-essential (Yorke, 2003).

A few months subsequent to these debates I became the principal investigator of a teaching development project which sought to enhance the learning elements of assessment. To avoid the confusions and doubts about formative assessment processes outlined above, I coined the term LOA. In LOA, learning comes first, both in the way the term is literally constructed, and as a matter of the principle of emphasising the learning aspects of assessment. A starting point for LOA was thus to characterise it as denoting assessment processes in which learning elements are emphasised more than measurement ones (Carless *et al.*, 2006). Our framework for LOA

(adapted from Joughin, 2005), summarised in Figure 1, seeks to reconfigure current thinking about assessment and learning in a productive form.

The starting point of the figure is the two main purposes of assessment, the certification element which focuses principally on evaluating student achievement, and the learning element. The intersecting circles indicate that when assessment is functioning efficiently, there should be substantial overlap between these two functions. The aim of LOA is strengthening the learning aspects of assessment and we believe that this can be achieved through either formative or summative assessments as long as a central focus is on engineering appropriate student learning. For formative assessments that learning purpose is an inherent characteristic, for summative assessments they develop productive student learning when the features described below are present.

The first and most crucial strand of LOA is represented by the term assessment tasks as learning tasks. This conceptualisation holds that when assessment tasks embody the desired learning outcomes, students are primed for deep learning experiences by progressing towards these outcomes, akin to what Biggs (1999) describes as constructive alignment of objectives, content and assessment. The tasks should promote the kind of learning dispositions required of graduates and should mirror real-world applications of the subject matter. In addition, the tasks should aim to spread attention across a period of study, not lead to short-term bursts of sustained study for an end of module assignment; or in the case of examinations the memorising of material which is soon forgotten.

The second component of LOA is student involvement in assessment so that they develop a better understanding of learning goals and engage more actively with criteria and standards. Within this strand, we include drafting criteria (Orsmond *et al.*, 2002); engaging with quality exemplars (Sadler, 2002); peer feedback (Liu & Carless, 2006) or peer assessment (Falchikov, 2005); and the development of self-evaluation skills or 'evaluative expertise' amongst students (Sadler, 1989). Through these activities, it is hoped that both the standards required and the transparency of the whole assessment processes can be enhanced.

Thirdly, for assessment to promote learning, students need to receive appropriate feedback which they can use to 'feedforward' into future work. Feedback in itself may not promote learning, unless students engage with it and act upon it (Gibbs & Simpson, 2004). Timeliness and promoting student engagement with feedback are thus key aspects. Although it is anticipated that the tutor would often provide feedback, peers can also be usefully deployed as givers of feedback (Falchikov, 2001).

The three strands are intended to be seen as a unified whole, rather than composed of discrete elements. For example, feedback is likely to be more effective when students are cognisant of criteria and are monitoring their progress towards the stated standards. Impacting on these strands are staff and student perspectives on assessment, represented at the right and left of Figure 1, as part of contextual influences impinging on the assessment process. For example, tutors' capacity to implement LOA may be constrained by their own limited experience of different assessment formats. Students may be initially reluctant to accept innovative assessment methods unless their rationale and potential advantages to them are clear.

The above framework of LOA is summarised by the following principles:

- Principle 1: Assessment tasks should be designed to stimulate sound learning practices amongst students.

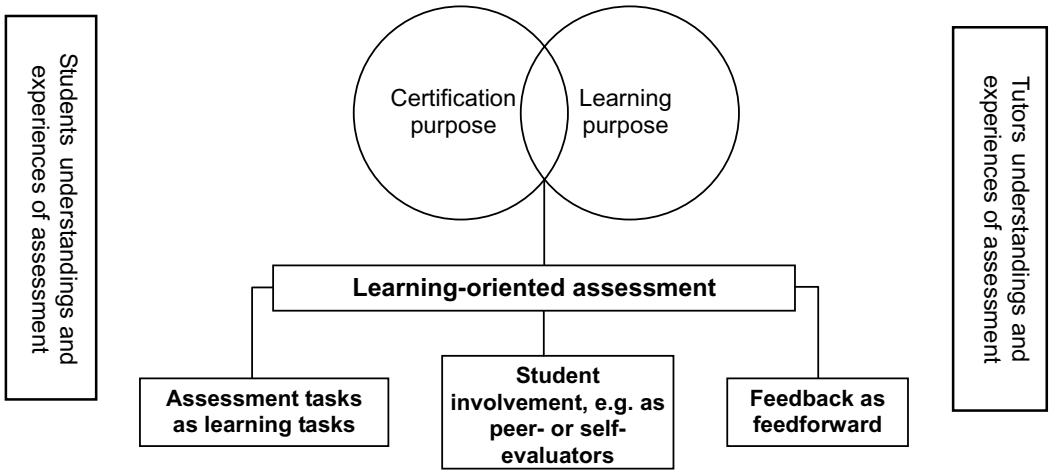

Figure 1. Framework for learning-oriented assessment

- Principle 2: Assessment should involve students actively in engaging with criteria, quality, their own and/or peers' performance.
- Principle 3: Feedback should be timely and forward-looking so as to support current and future student learning.

Institutional promotion of learning-oriented assessment

Here I focus on LOA at the institutional level through a reflective account of a four-year (October 2002 to September 2006) funded initiative entitled learning-oriented assessment project (LOAP). My intention, in this section, is to examine some of the issues in promoting improvement in assessment through the discussion of the specific case of LOAP. One of the justifications for this discussion is that the development of the conceptual side of LOA outlined above would not have taken place without the pressure and support from the wider project.

The main aim of LOAP was to identify, promote and disseminate good practices in LOA in higher education in Hong Kong. The project was based in the HKIEd but also involved collaboration with other universities and participation of overseas consultants. LOAP was a staff development initiative, rather than one with a specific remit for university-wide change, but we naturally sought impact at the institutional level. One of the challenges for any project which seeks to have a wider institutional impact is how to motivate staff to become involved. There are many competing demands on staff so why would they commit themselves to LOAP rather than any other project, their own teaching or research? We found this a particular challenge for a project focused on assessment because our interactions with colleagues indicated that many found assessment a domain that carried negative overtones: concerns about the pernicious influences of assessment as accountability; a perception of assessment as a difficult and problematic field; and heavy marking loads. In essence, assessment seems to have a negative image amongst many academics. The use of the term LOA was one modest attempt to attract colleagues who perceived themselves as being interested in learning but less so in assessment.

The LOAP team attempted a number of other strategies to involve colleagues in the project, albeit with varying degrees of success. Our main strategies, discussed further below, were essentially fourfold: using a combination of bottom-up and top-down processes; building the project around a series of both traditional academic and 'scholarship of teaching' products; utilising prestigious overseas consultants to raise the profile of the project and provide input; and collaborating with the educational development unit in the university.

The project was launched with an essentially bottom-up strategy, using a core team of faculty representatives to disseminate its aims to colleagues. The first stage of this process sought to identify current practices employed by HKIEd staff. Our first modest product was thus a collection of summaries of useful LOA practices via a user-friendly two-page pro-forma, using a collection of classroom assessment techniques (Angelo & Cross, 1993) and the ASSHE (Assessment Strategies in Higher Education) inventory (Hounsell *et al.*, 1996) as inspirations. These summaries provided a means of publicising the project and involving staff in a way that was neither time-consuming nor onerous. The active support of the university President married the bottom-up approach with some top-down impetus and helped to encourage colleagues to submit their practices. Around 40 summaries were initially received from a total academic staff of nearly 400, an encouraging response. These contributions were posted on the project website (LOAP, 2004) so there was an opportunity for immediate small-scale recognition and exposure. By extending the collection to the other universities in Hong Kong, we subsequently developed these contributions into a sourcebook of LOA practices (Carless *et al.*, 2007). This sourcebook contains chapters reviewing key challenges and progress in assessment; outlines the conceptual basis of LOA; and showcases 39 short accounts of LOA practice, each including commentary and further suggestions.

A content analysis of the summaries of practice led to the identification of a number of themes with relevance to LOA: self-assessment; peer assessment; technology-enhanced assessment; feedback; and portfolio assessment. LOAP set up action research teams to explore these themes further in developmental work with their own classes (e.g. Keppell *et al.*, 2006; Mok *et al.*, 2006). We believed that action research was a suitable strategy as it involved staff in a bottom-up way whilst also providing structure and resources from LOAP. The action research processes included working gradually towards tangible products, including two one-day LOAP conferences (June 2004 and June 2005) and the subsequent publication in 2006 of a special issue of *Assessment and Evaluation in Higher Education*. Action research processes have been seen to be a particularly suitable strategy for exploring the renewal of assessment practices in higher education (e.g. McDowell & Sambell, 1999; Swann & Ecclestone, 1999).

One of the most productive strategies in the project was the deployment of overseas consultants as scholars in residence, conducting a series of short intensive visits. These consultancy visits formed the basis of the LOAP lecture and seminar programme, helped to establish a high profile for the project and provided valuable insights, both with respect to views of assessment and thoughts on how the project could be managed to maximise its impact.

A further strategy was the involvement of members of the educational development unit in the HKIEd. Their roles as staff developers made them natural partners and highly aware of the challenges and possibilities in the enhancement of university practice. As Knight and Yorke (2003) argue, a profitable strategy for assessment change involves educational development units working in partnership with institutional teams.

LOAP hopes over the medium term to have an impact in contributing to some change in the assessment culture in the HKIEd and the wider Hong Kong context, yet there is evidence from a LOAP questionnaire survey (Liu, 2004) that staff views of assessment are sometimes relatively entrenched. A major challenge to a learning-oriented perspective on assessment is the dominance of viewpoints which simply equate assessment with grading or measurement. Formative approaches to assessment risk being drowned by the power of summative assessment. Potential ways forward appear to be developing productive synergies between formative and summative assessment; and developing the kinds of summative assessment that fulfil the characteristics of assessment tasks as learning tasks as discussed earlier in the paper. Summative assessment is powerful and necessary so handling it effectively remains paramount.

My reflection on LOAP is that it has been most successful in its deployment of external consultants and in its development of tangible products, such as the sourcebook and the journal special issue. These ensure some form of project legacy and facilitate impact beyond the individual level. The combination of bottom-up strategies mixed with some top-down support from senior management and/or the project team has also been generally effective. The method of drawing people into the project in various ways has had some successes and via the journal special issue and the collection of practices in the sourcebook, around 50 staff members have achieved some form of publication. Impact on what goes on in the classroom is more difficult to judge, but the sourcebook does provide tentative evidence of tutors reflecting on and refining their LOA practices.

LOAP has been less successful in trying to promote wider institutional change. In this case, LOAP's position as a project does not afford it any clear authority or role in the committee structure of the HKIEd. Senior managers may be pre-occupied with crisis management or externally generated priorities so developments in teaching, learning and assessment may sometimes be prioritised lower than other more urgent tasks. A failure to mobilise middle management, such as heads of department or programme leaders (cf. Knight, 2000), also limits the influence of the project. LOAP as a staff development initiative has mainly impacted on those who were already relatively receptive to the ideas being promoted. How to stimulate staff on the periphery is an ongoing challenge meriting further attention. One potential way forward is working with subject groups or course teams rather than just enthusiasts.

In sum, LOAP achieved a strong profile both institutionally and further afield, through its activities and academic products. A high profile does not, however, naturally lead to improvement beyond the individual level. A relevant question with which to end this section is that posed by Yorke (2001): how does an institution learn from its diverse experiences of assessment and develop further?

Module-level implementation of learning-oriented assessment

In the first section of the paper, I argued that LOA is underpinned by three key elements, appropriate tasks, student involvement in assessment and feedback that can be productively acted upon. Here, I indicate how this LOA framework can be implemented in practice through an example of a 12-week 30-hour module, with a class of 35 pre-service students in a Bachelor of education programme. My purpose here is not to claim that the teaching of the module is

innovative or represents best practice, but more modestly to illustrate some of the practical possibilities inherent in the LOA model.

The module is itself on the topic of Assessment and has objectives for students to demonstrate their understanding of formative and summative approaches to assessment; and construct appropriate assessment tools. Two assessment tasks were set for the module, both of them involving the design of assessment instruments suitable for use in schools. Grading was criteria-based with each assignment carrying equal weighting. The first assignment was for students to design a formative assessment task for school pupils (handed in mid-way through the module), the second to design a summative assessment task (handed in at the end of the module). In each case, students were also asked to state the rationale for the task and how it supported student learning. For both assignments, students were required to include a self-evaluation of their work.

I believe that the assessment tasks are well-aligned with curriculum objectives and allow for effort to be distributed evenly through the duration of the module. They are also designed so as to facilitate improvement between one assignment and the other, particularly as some of the features: rationale, support for student learning and self-evaluation are common to both. The limitations of the tasks include a minimum of student choice and that they are not strongly integrated with actual school experience with real pupils.

I turn now to involvement of students in the assessment process and the development of evaluative expertise. Institutional quality assurance guidelines encourage tutors to distribute assignment information and grade-related criteria in the first session of a module. This was done, although it misses an opportunity for students to be actively involved in the generation of criteria (cf. Rust *et al.*, 2003). Instead, a class activity was done in week 3, in which students tried to identify, and summarise in their own words, the key elements of the criteria. The purpose of this was for students to try to unpack the discourse of assessment criteria and develop a deeper understanding of the qualities of a good assignment. This also helped them to prepare for their self-evaluation, which could be completed with reference to the criteria and/or by adding their own self-identified features. My purpose in encouraging self-assessment of this kind is to push students to engage actively with the required standards and to self-monitor their own work.

A modest further attempt to promote evaluative expertise involved the use of student exemplars. Samples of previous student work were discussed briefly in class. If further time had been available a worthwhile activity would have been for students themselves to assess against the stated criteria samples or extracts from previous student work. After the first assignment had been marked, I copied for the class extracts from the work of two students who had produced the best sections on how their assessment supports pupils' learning, an aspect of the assignments that many of the students found difficult. Sadler (2002) suggests that analysing high-quality exemplars is more effective than focusing on criteria and recounts the potent impact on his students of being exposed to outstanding assignments.

Feedback in the module was arranged so as to maximise its potential for student action in line with the LOA framework. One form of feedback came two weeks before the due date of the first assignment. At this stage, student individual tutorials were held instead of the regular taught class. This enabled students to collect feedback on the draft of their first assignments, receive reassurance that they were on the right track and collect feedback which

could help them obtain a higher mark on the assignment. The students themselves expressed the view that feedback on drafts is more useful to them than feedback on completed assignments. Yorke (2003) warns, however, that feedback on drafts helps students to produce better performance, but subsequently they may not be able to succeed independently on analogous tasks.

The first assignment was handed in mid-way through the module and marked promptly so that students could receive their feedback on it before they completed the second assignment. To encourage engagement with feedback, students were required to write a response to the feedback at the beginning of the second assignment. This represented attempts to fulfil two conditions under which feedback supports learning (Gibbs & Simpson, 2004), pertaining to timeliness and feedback that can be acted upon. An alternative form of timely interactive feedback, used in a previous delivery of the module, involved oral 'mini-vivas' (Carless, 2002).

A further form of feedback was provided in class before the second assignment was due. This involved focused input on problem areas that had either been exhibited in the first assignment or by previous students of the module. This was an attempt to deal with likely problems pre-emptively rather than after they had occurred. Much feedback in higher education comes too late for it to be useful to students.

In sum, a variety of timely written and verbal feedback was provided during the module, albeit with the limitation that most of it was tutor-led and may result in students becoming somewhat dependent on the support of their lecturer. In order to make the tutor workload manageable, for the second assignment less detailed written annotations were provided in view of the fact that as this was the end of the module, there was little direct opportunity for further improvement. At the risk of seeming to preach laziness, a wider speculation is whether detailed annotations on terminal assessments are a productive use of lecture time and might sometimes be replaced simply by a few concise points for further development.

Overall, within the limited time available, the module described here attempted to exemplify the elements of the LOA framework, admittedly without pursuing any of the elements in great detail. In summary, the main LOA aspects of the module were: assessment tasks that spread effort across different periods of the module and through commonalities facilitated the possibility of improvement; engagement with criteria allied with self-evaluations carried out by students as part of the process of developing evaluative expertise; formative feedback on drafts for the first assignment; and feedforward from the first assignment to the second one.

The learning outcomes of students were generally impressive as evidenced by their assignments and the module was very positively evaluated by participants. Some of their open-ended evaluation comments which illustrate their response to LOA are as follows:

> When designing the self-evaluation sheet, I have to refer back to the criteria and then check with my assignment. I think this acts as a double checking. Before, I seldom checked my assignments deeply.

> Before we do the second assignment, you used half a lesson to tell us the things we should be aware of. Then we can have less mistakes or misunderstandings.

> The module assignments allow me to practise what I learned in the module. I received concrete feedback in the consultation and useful comments in my first assignment, so that I know what aspects I should improve in the second assignment.

Conclusion

This paper has put forward a case for assessment discourse focused on learning rather than measurement. LOA is conceptualised as focusing on three core elements: assessment tasks which promote the kind of learning which is sought; the involvement of students in the assessment process as exemplified by the development of evaluative skills; and feedback which feeds forward by prompting student engagement and action. A potential strength of LOA is that it can be applied to formative or summative tasks, particularly when the latter are designed in terms of 'assessment tasks as learning tasks'. The paper has also discussed attempts to promote LOA at an institutional level and at the practical level of a specific module.

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Note on contributor

David Carless is an Associate Professor in the Faculty of Education at the University of Hong Kong. He was the principal supervisor of the learning-oriented assessment project in his previous post as Senior Lecturer in the Hong Kong Institute of Education.

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