Developing students’ capacity for innovation, creativity and critical thinking through contemporary forms of assessment: a case study in progress

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Innovative assessment practices have the potential to change the way universities function. By focusing on well designed, innovative assessment tasks that require students to work collegially and be actively involved in self- and peer assessment, we have the opportunity to engage students in the assessment process. Discontent with current assessment practices and levels of student engagement provoked us to undertake this study. We began by asking 271 first-year Bachelor of Education (Primary) students about their perceptions of the assessment process, and it is our contention that many of the students in our sample were significantly and detrimentally disengaged from the assessment process. As a result, the assessment process had become a case of ‘going through the motions’ on the part of both the lecturers designing assessment tasks and the students completing them. Key issues that emerged included: large proportions of students not proofreading their own, or each other’s, work; lack of student collaboration; and no prior experience of involvement in developing assessment tasks or marking criteria. Consequently students showed little evidence of judgment or ability to assess their own efforts. These issues led us to develop a model of self- and peer assessment known as Authentic Self and Peer Assessment for Learning (ASPAL), currently being trialled with undergraduate students at the Sydney campus of the University of Notre Dame Australia. Initial results have been very encouraging, with students displaying marked increases in collegiality, personal engagement with assessment tasks and judgment skills.

Keywords: higher education; innovation; peer assessment; self-assessment

Theme: sustainable assessment practices and standards

Introduction

The literature is clear about the value of assessment for learning, feedback and authenticity in assessment; however, the rhetoric, in our experience, does not match the reality in university courses. There seems to be a notion that, although the foundations for reform in assessment are present (Boud & Associates, 2010), traditional forms of assessment are too entrenched to allow genuine change. There also seems to be a perpetuation of the dichotomy between traditional approaches and the ideals of critical and lateral thinking, autonomy and thoughtfulness in education. Sir Ken Robinson echoes these sentiments:

Collaboration, diversity, the exchange of ideas and building on other people’s achievements are at the heart of the creative process. An education that focuses only on
individual isolation is bound to frustrate some of those possibilities (Robinson, cited in Azzam, 2009, p. 24).

This paper is a response to the Australian government’s call for reform in higher education (Bradley, Noonan, Nugent & Scales, 2008), as well as the Assessment Futures Project and the Assessment 2020 paper (Boud & Associates, 2010) which have called for reform in the nature of assessment in higher education. As a result, in early 2010 various forms of innovative assessment were informally trialled at the University of Notre Dame Australia (UNDA). From those trials and a review of the literature, Authentic Self and Peer Assessment for Learning (ASPAL) was developed as an assessment model for the implementation of Authentic Assessment for Sustainable Learning (AASL). Both the ASPAL and the AASL models are currently being trialled in selected undergraduate units in both primary and secondary education courses at the UNDA. This paper will present the conceptual framework of the ASPAL and AASL models.

Self-assessment is considered to be a valuable learning activity (Falchikov & Boud, 1989) that encourages a deep approach to learning (Boud & McDonald, 2003). Boud (2000, p. 5) defines self-assessment as involving students in “identifying standards and/or criteria to apply to their work and making judgments about the extent to which they met these criteria and standards”. Self-assessment assists students in establishing a base for lifelong learning and in developing the potential to engage as intrinsically motivated learners in reflective practice. It also encourages autonomous self-sustained learning and critical thinking by developing capacity, influence and metacognition (Tait-McCutcheon & Sherly, 2006). Self-assessment also promotes autonomous learning, which is why it is valued for sustainable student learning.

In traditional forms of assessment, control rests with the lecturer, authentic and sustainable assessment should focus clearly upon the learning experience. Our perspective, and that of our students gleaned from informal conversations, is that many students perceive the process of assessment to be arbitrary, and are often surprised by the marks they receive. This can lead to a situation where students perceive the assessment process as out of their control and not worth engaging with. Boud cautions us about this, explaining that summative assessment, in its current condition, “provides a mechanism of control exercised by those who are guardians of particular kinds of knowledge ... over those who are controlled by assessment” (2000, p. 155). This control is what needs to be relinquished by the university if authentic learning is to occur to promote the development of a ‘learning community’ where knowledge is attained through collaboration and mutual understanding of expectations and outcomes. Peer learning and peer assessment have also taken a central position in the literature regarding assessment and assessment reform. While Boud, Cohen & Sampson (1999) caution against students making judgments about each other’s performance in working groups, they also acknowledge that “the input of peers into assessment decisions is valuable and ways of using data of this kind must be found” (p. 421).

The ASPAL model presented here provides a way of using peer assessment as a valuable tool for pre-service teachers learning how to assess their own students. The students receive feedback from their peers, who will, in the future, be their colleagues. Raban and Litchfield
(2007) assert that “this strategy creates a formative, diagnostic and summative assessment environment in which the students can learn the skills of peer assessing their fellow students using quantitative rating and qualitative comments” (p. 35). While Raban and Litchfield were not using this strategy in an Education course, their assertion is particularly relevant in these context, where the capacity to assess accurately is an important professional skill students need for their future careers.

The pitfalls of peer assessment have also been discussed, including concerns regarding efficacy, accuracy and size of classes (Ng & Earl, 2008; Taylor, 2008; Boud, Cohen & Sampson, 1999; Brown & Glasner, 1999). In their study, Dochy, Segers & Sluijsmans (1999) found “that the use of the self, peer and co-assessments is effective”, and their results with regard to accuracy indicated that, “self- and peer assessment can be used for summative purposes as a part of the co-assessment” (p. 344). In a study of sports studies students, Bloxham and West (2004) found that peer assessment not only supported students’ own learning but also improved their understanding of the process of assessment. However, the ASPAL model accounts for most of the concerns expressed in the literature. Through the implementation of pilot marking, students have become familiar with the process of applying criteria, become more confident in the marking process and learnt to establish congruency with regard to expectations both of themselves and of their peers.

Rationale

Our discomfort with current assessment practices and levels of student engagement regarding assessment stimulated us to undertake an initial survey of our students. Amongst approximately 45 Bachelor of Education (Primary) and 25 Bachelor of Education (Secondary) students, we found the following:

• More than 80 per cent of students in our classes were not reading their own assessments before submitting them.
• More than 85 per cent of students in our classes had never seen another student’s assessment task.
• Almost 100 per cent of students in our classes were working in isolation from their peers.
• More than 90 per cent of students in our classes had never been given the opportunity to be a part of the assessment process during their education.

After receiving these discouraging responses, we began asking students for their feedback regarding new forms of assessment. This led to our framework for trialling new and creative ways of engaging our students through the use of innovative assessment techniques. Through their responses and a review of the literature, we determined the following.

• Assessment should reflect what is learnt and considered important throughout the course.
• Students want feedback as soon as possible after an assignment is submitted. If too long a period of time passes without feedback, the feedback is not valued.
• Anonymity in peer assessment is essential.
• Students do not like relying on peers for a mark – they want their marks to be moderated by an expert.
• Students need practice in assessing and in the language of assessment before they take part in the process of peer and/or self-assessment.
• Students want to be part of the process of creating assessments, developing criteria and marking tasks, as long as they have been trained to do so.

Based on student feedback, a review of the literature and a trialling of new forms of assessment at the UNDA, we developed our conceptual framework for sustainable assessment through self- and peer assessment developed. The framework took the form of the ASPAL and AASL models. There are two separate configurations of the ASPAL model: individual assessments and group assessments.

**ASPAL individual assessment model**

The ASPAL individual assessment model is illustrated in Figure 1. In this model, three modes of assessment are undertaken and the subsequent marks used to calculate the final assessment mark. In this model, two peer-assessment marks are averaged and together account for 30 per cent of the final mark; students’ self-assessment of their own work accounts for another 30 per cent; and the lecturer’s mark acts as a moderator and accounts for 40 per cent of the final mark.

![Figure 1: ASPAL individual assessment model](image-url)
The rationale for this method of assessment is that the student becomes a vital part of the assessment process, from collaboratively creating the marking criteria to marking their own and others’ work. This level of engagement with the critical success factors of the unit and the course is the basis of the implementation of this model. Collaborative process both among students and between the students and the lecturer are deemed vital for sustainable learning practices. The process is as follows: Students are randomly paired and given two anonymous assignments. They are given 20 minutes to complete each one, during which they are each to read the assignment and give it a tentative mark of between 1 and 5 (low to high). They then discuss and defend their mark with the other member of their pair, and award their final mark according to the marking criteria. While collaboration is necessary, agreement is not. The same process is repeated for the second assignment. At the end of the peer-marking session, the students spend 20 minutes marking their own assignment, alone, against the marking criteria. This reflective self-assessment of their own work against the criteria is imperative for the process, since students are evaluating themselves against the criteria but also in relation to their peers’ work, which they have just assessed. Along with the pilot marking conducted earlier in the process, the marking criteria and their peers’ work, this gives them a basis of comparison for their own performance.

The APSAL model requires the assessment process to occur as soon as possible after students’ work has been submitted. The literature is clear about the necessity for such expeditious feedback (for example, Zariski, 1996), and this was confirmed by student feedback. Ideally this process would take place within one week after the assignments were handed in, or during the next available lecture or tutorial. The lecturer’s mark, worth 10 per cent more than the self-assessment and the peer assessment individually, works as a moderating mark. However, as it is less than the cumulative total of the self and peer marks, control of the overall mark is in the hands of the students, not the lecturer.

**ASPAL group assessment model**

The rationale of this model is the same as that of the individual model, with one clear exception: the addition of assessment of individuals’ performances within the group context, which accounts for 15 per cent of the individual mark. In this model the peer-assessment mark and the self-assessment mark account for 25 per cent each, while the lecturer’s mark accounts for 35 per cent. Group and self-assessment of individual performance is a necessary factor in ensuring that groups work collaboratively and that all members are participating fairly in the group’s product.
Many factors need to be considered when undertaking self- and peer assessment, not least of which is the extent to which these methods of assessment encourage or inhibit cooperation (Boud et al 1999). It is our contention that if the idea of self- and peer assessment is ingrained, then the group dynamic will be strong and cohesive; thus, individuals will pull their weight and the group result will be better. This process will be accepted as another, typical aspect of assessment.

The group and self-assessment of individual performance is a twofold process. Firstly, each group member prepares a short report detailing their contribution to the final assignment. This is known as an Individual Contribution Report (ICR) (Clark, Davies & Skeers, 2005). Each group member reads the ICR before marking that individual on their performance. Individual performance is marked on a simple Likert scale\(^1\), rated between 5 and 1 (high to low). In addition to the Likert scale, each member of the group also indicates their agreement or disagreement with the individual’s ICR and makes a qualitative comment with regard to the score awarded.

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<th>Was invaluable to the group</th>
<th>Worked hard with the group</th>
<th>Average worker in the group</th>
<th>Did not work as hard as was needed</th>
<th>Made the group’s work more difficult</th>
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\(^1\) The marks and feedback are returned to the students immediately following this process.
We believe that the rationale for assigning group work and awarding a group assessment mark should be based on those authentic skills that students will need in life outside the classroom: communication, cooperation, collaboration, sacrifice and teamwork. As Stembourg (2008) remarks, “we should assess what students need to become: active and engaged citizens of the world in which they will live – in a sense, what it takes to be ‘expert’ citizens” (p. 20). We consider it vital that our rationale for assigning any assessment tasks be authentic and valid: if we set a group task it should be to benefit the students, not just satisfy institutional needs.

In this model, students are assigned, or choose, their groups according to the particular assessment requirements. All members of the group will get the same mark for the assignment, albeit moderated by the individual group mark given by the members of the group. In the group model, it is the group that must peer-mark the other groups. The rationale for this is twofold, firstly, because teamwork and collaboration are a criteria for success in a group task, secondly, marking as a group against the criteria should give the group a more accurate basis for awarding their own self-assessed group mark during that phase of the process.

This model of group assessment lends itself to immediate feedback: groups could potentially present and be marked in the same lecture or tutorial. This would be extremely valuable to students, as the feedback they receive would help them to consolidate the knowledge and skills gained throughout the process, culminating in a greater level of overall achievement. Feedback is one of the most powerful influences on learning and achievement (Hattie & Timperley, 2007), and how we construct and evaluate these tasks to provide feedback determines the potency of such feedback.

Conclusions

In trialling these new forms of assessment, we found the most valuable outcome was that students were now engaging in discourse, both with their peers and with their lecturers, with regard to course content. As a result of our initial trials, students were not only reading their own work before handing it in but were also checking each others’ work and providing formative feedback to their peers. Students were also better able to gauge the quality of their work before submitting it, because they had seen others’ work and better understood the assessment criteria. Additionally, they were fully engaged in the processes of creating criteria, marking and providing feedback for the task, which gave them a sense of autonomy in their learning. Students also saw value in the task itself, because it was authentic and they could readily see the value in completing the task for their own personal and professional growth. What we saw as observers could be considered one of the most important aspects from our perspective: students were able to successfully reflect on the value and quality of the learning that took place, an indicator of the skills necessary for sustained learning.

It is our contention that the quality of traditional forms of assessment in higher education today does not meet the needs of 21st-century students. In Assessment 2020, Boud and Associates argue:

Universities face substantial change in a rapidly evolving global context. The challenges of meeting new expectations about academic standards in the next decade and beyond
mean that assessment will need to be rethought and renewed (Boud & Associates, 2010, p. 1).

Assessment needs to be meaningful so that students, at any level, can find relevance in what they are trying to achieve and can therefore engage with the content. Authentic assessment endeavours to bridge the gap between university and the outside world and has been defined by Thuy and Dall’Alba (2000) as “an educational intervention for improving students’ performance via a strengthened link with the world beyond formal education” (2008, p. 1). Boud argues that sustainable assessment draws attention to the “knowledge, skills and predispositions that underpin lifelong learning activities” (p. 151). These views together provide the basis of AASL, an assessment model that focuses on democratising assessment by making it a collaborative effort between students and lecturers. This model fosters the development of learning communities in a classroom focusing on skills such as innovation, creativity and critical and lateral thinking, which, in our experience, are necessary for intellectual independence. Implementing AASL through the ASPAL model will require what Singh and Terry (2008) call “profound shifts” in the conceptualisation of assessment at tertiary level (p. 402). However, it is these conceptual shifts that we believe are imperative for the tertiary sector to encourage students to develop the skills they will need to thrive in the workforce in coming decades.

References


