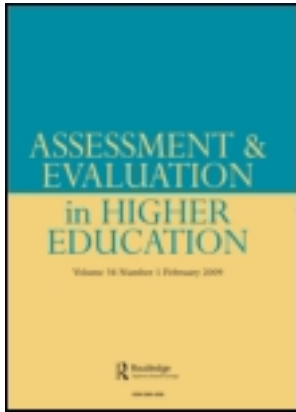


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### Peer and self-assessment in the first year of university

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## Peer and self-assessment in the first year of university

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This paper reviews the literature about peer and self-assessment in university courses from the point of view of their use, and the suitability of their use, in the first year of university study. The paper is divided into three parts. The first part argues that although first-year students are involved in many of the studies that report on the use of peer and self-assessment in higher education, the proportion of these studies that do so is somewhat less than in other year levels. In addition, relatively little of this work directly and explicitly discusses the suitability of peer and self-assessment for students and courses at this year level. The second part of the paper provides an introductory exploration of the relationship between peer and self-assessment, and specific features of first-year assessment, learning and teaching. Three issues relating directly to the suitability of peer and self-assessment in the first year are explored. In the third part, the paper briefly discusses the desirability of implementing peer and self-assessment, in general, before seeking to extend this specifically to the first year. The paper concludes by recommending that greater use can and should be made of peer and self-assessment in the first year of university study.

**Keywords:** peer-assessment; self-assessment; curriculum design; first-year; evaluation

### Introduction

There is an extensive literature about the use of peer and self-assessment in higher education. Among the best known and most significant contributors to this field are Professor David Boud, who has written on the topic since the 1970s (e.g. Anderson and Boud 1996; Boud 1979, 1981, 1991, 1995, 1998, 1999; Boud and Brew 1995; Boud and Falchikov 1989, 2007; Boud and Holmes 1981; Boud and Tyree 1979; Falchikov and Boud 1989) and Dr Nancy Falchikov, whose 2004 book (since re-published) is regarded as the single most important literature survey in the field to date (Falchikov 1995, 2004; Falchikov and Boud 1989; Falchikov and Goldfinch 2000). Despite the volume of research papers and books on this topic, Topping (1998) commented that the literature on peer-assessment in 'higher education is at an early stage of development, very variable in type and quality, and scattered and fragmentary in nature' (Topping 1998, 267). Much of what Topping said in 1998 appears to remain true more than 10 years on.

Of more significance to this paper is that many of these studies do not specify year level and some do not mention it at all. Furthermore, the proportion of this literature that relates to the use of peer and self-assessment in the *first year* of study in higher

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education is rather less than other year levels. More importantly, most of these studies do not discuss the relationship between the use of peer and self-assessment, and specific features of first-year assessment, learning and teaching. Thus, the suitability of peer and self-assessment to first-year students and courses can be inferred, but is rarely directly addressed.

To illustrate, in a review of self- (not peer) assessment, Boud and Falchikov (1989) tabulated details of 44 different quantitative studies conducted between 1961 and 1989. Of these, just 10 explicitly stated that first-year university students were involved. Only one of these studies specifically mentioned 'first-year' in its title – and that was unpublished. Half (22) of the 44 studies were related to the use of self-assessment in other years, and many (12) did not mention year level at all.

Following this work, Falchikov and Goldfinch (2000) produced a meta-analysis building on the former analysis by Boud and Falchikov (1989). This review tabulated details of 47 published quantitative studies of student peer-assessment in higher education between 1959 and 1999. Of these, 11 studies involved first-year undergraduates.

In a review of peer- (not self) assessment, Topping (1998) reviewed 109 studies. Just seven of the titles amongst these articles mentioned year level and only three mentioned 'first-year' (or 'freshers'). Topping's analysis (deliberately) focused on what was assessed or how the assessment was undertaken, rather than the year level of those undertaking assessment. As such, the possibility that year level is *itself* an important variable to consider was not examined – and, to be fair, it seems that any such examination would have been difficult. Topping's principal note about year level was that when peer-assessment is undertaken, it is generally between students of the *same* year level. Accordingly, where Topping includes 'year' (252) as one of the 17 characteristics of a typology of peer-assessment, he meant whether peer-assessment is between students of the same or different year levels. It is only much later in his paper (on its penultimate page 268) that he recommends year level be included among participant characteristics in future research.

Unfortunately, little seems to have changed in the intervening years since this recommendation. A search of the past 10 years of papers from *Assessment & Evaluation in Higher Education* elicited 41 items that included 'peer' and 'assessment' in their titles. (The two words were deliberately kept separate as search terms to increase the capture of potentially relevant papers.) Of these, none mentioned first-year in the title, even though some of them did involve first-year students and courses in their research. Finally, the meta-analysis offered by Falchikov also does not examine the issue of the suitability of peer and self-assessment to different year levels (Falchikov 2004).

Thus, not only are papers that report on the use of peer or self-assessment involving first-year university students relatively scarce (at least, in comparison to other year levels), but it is also true to say that papers about peer or self-assessment tend not to explicitly report on the suitability (or otherwise) of peer or self-assessment for any particular year level.

The examples, which do explicitly involve first-year students in a first-year course, include an interesting series by Orsmond and others (Orsmond, Merry, and Callaghan 2004; Orsmond, Merry, and Reiling 1996, 1997, 1998, 2000, 2002). While these papers serve to support the argument that peer and self-assessment can be successfully used in first-year courses, they do so incidentally rather than by design. These papers are illustrative of the tendency to report on the use of peer and self-assessment itself – the fact that the students or the courses used in this research are first-year is largely incidental. This is not meant as criticism of these authors but simply a note that the

suitability of peer and self-assessment for first-year students and courses was not itself the focus of their research.

Exceptions to this tendency include Fazey (1993), van Hattum-Janssen and Lourenço (2006), van Hattum-Janssen, Pacheco, and Vasconcelos (2004), O'Donovan, Price, and Rust (2004), and Rust, Price, and O'Donovan (2003).

Fazey (1993) argued that self-assessment was important to, and appropriate for, first-year students and courses. Both van Hattum-Janssen papers demonstrated that peer-assessment (and implicit self-assessment) can be effectively used by large classes of first-year engineering students. This is significant for three reasons: it is a first-year course; class size was large; and engineering is a discipline in which curriculum content is relatively constrained by accreditation requirements (which might translate into relatively constrained ways of thinking about assessment, learning and teaching). O'Donovan, Price, and Rust (2004) and Rust, Price, and O'Donovan (2003) demonstrated the effectiveness of engaging first-year business students in a simple 90-minute exercise at the very beginning of their first term at university. Further consideration of these studies will be returned to later in this paper.

To conclude this introduction and literature scan, 20 years ago, Boud and Falchikov (1989, 530) classified the literature on student self-assessment under three headings: 'conceptual; practical qualitative; and quantitative'. From a reading of the literature today, this classification still appears to hold good. Furthermore, this classification is also useful for the literature on peer-assessment – although some elaboration on the third category into three sub-areas seems to be warranted (see below).

Examples of publications with good *conceptual content* (i.e. those that have a theoretical component) include Andrade and Du (2007), Boud (1998), Heron (1981, 1988), O'Donovan, Price, and Rust (2004), and Rust, Price, and O'Donovan (2003).

*Practical qualitative* is perhaps an ambiguous term. Publications under this heading are 'practical' in that they provide details of critical factors for effective implementation of peer and self-assessment. They are 'qualitative' in that they are descriptive of how peer or self-assessment can be done. Examples include Ballantyne, Hughes, and Mylonas, 2002 and Boud, 1991 and 1995.

*Quantitative* publications focus more on three sub-areas:

- (1) The *effectiveness of the technique* as a learning or assessment tool (e.g. Berg, Admiraal, and Pilot 2006; Boud and Falchikov 1989; Falchikov and Boud 1989; Liu and Carless 2006; McDonald and Boud 2003; Orsmond, Merry, and Reiling 1996, 1997, 1998, 2000, 2002; Orsmond, Price, and Rust 2004).
- (2) *Students' opinions and experiences* of it (e.g. Andrade and Du 2007; Bloxham and West 2004, 2007; Cassidy and Weinberg 2005; Cheng and Warren 1997; Gayle, Martin, and McQueen 2002; Lejk and Wyvill 2002; Mok et al. 2006; Vu and Dall'Alba 2007).
- (3) *Correlations between student assessments and ratings given by academic staff* (Cassidy 2007; Falchikov and Goldfinch 2000; Gruppen et al. 1997; Hafner and Hafner 2003; Lejk and Wyvill 2001a, 2001b; Magin 1993, 2001a, 2001b; Magin and Churches 1988; Magin and Helmore 2001).

### **The suitability of peer and self-assessment in the first year**

One of the aims of this paper is to begin to query whether there is some feature (or features) of first-year university education, or first-year university students themselves,

which prohibits the use of peer or self-assessment, and thereby try to determine whether the use of peer and self-assessment with first-year university students warrants greater attention.

Three issues will be explored:

- (1) Whether academics know how to make good use of peer and self-assessment (the year level is ostensibly irrelevant).
- (2) Whether there is some feature or features of students in first-year university courses that prevent them from successfully engaging in peer and self-assessment, that is students at this year level may not be capable of successfully engaging in the use of peer and self-assessment.
- (3) Whether there is some pedagogic feature of first-year university assessment, learning and teaching, which is not well suited to the use of peer or self-assessment and which renders it difficult at best, or inappropriate at worst, that is the educational purpose of first-year courses may not be well served by peer or self-assessment, and/or the learning strategies that are employed might be incompatible with peer and self-assessment.

### ***Issue 1: academics' knowledge about how to make good use of peer and self-assessment***

Given the volume of literature on the topic of peer and self-assessment, it is reasonable to contend that those academics wishing to find out about them, and to try these approaches with their students, have the option to do so. Furthermore, if, generally speaking, academics do not know how to make good use of peer and self-assessment, then this would prohibit their use in any year level. Therefore, this issue is not by itself an explanation for the observed pattern of reporting in the literature (in which year level is a variable that is rarely explicitly addressed). Some other explanation must be at work.

A more focussed way to examine this issue might be to ask: do most academics know how to make peer or self-assessment work *in first-year courses with first-year students*? However, if the answer to this question is 'no', it would also be logical to argue that this is either because of some characteristic of students (Issue 2) and/or some pedagogic feature of first year (Issue 3). It follows that it is those issues that are more salient for this paper, and it is to them that I now turn. By doing so, as will be seen, this paper seeks to demonstrate that valid obstacles to the use of peer and self-assessment, which are unique to first-year courses and/or first-year students, are minimal.

### ***Issue 2: the relationship between characteristics of first-year students and the use of peer and self-assessment***

To start this section, it is worthwhile to consider the relationship between peer and self-assessment because this helps to understand the characteristics that students require in order to engage successfully in their use.

Boud (1995, 12), citing himself, defines self-assessment as:

the involvement of students in identifying standards and/or criteria to apply to their work, and making judgements about the extent to which they have met these criteria and standards. (Boud 1991, 5)

By extension, peer-assessment is the same, except that in this case, students are explicitly involved in *helping each other* to identify the standards and criteria, and making judgements *about each other's work* in relation to those criteria. Boud (1995) explains that peer-assessment is essentially subordinate to self-assessment because it is ultimately through self- (not peer) assessment that individuals evaluate their actions/work and adjust future behaviours/ideas. On the other hand, he also emphasises that self-assessment necessarily incorporates the views and judgements of others because 'We live alongside others in community with them and share common cultures and values' (Boud 1995, 15). This is a critical point: it means that the act of self-assessment is *informed* by our understandings of the ways in which others (peers) would assess us, and their different ways of performing, just as our own understandings simultaneously inform the judgements and performances of those others. There is a reciprocal inter-dependency between individuals and the collective community of which those individuals are a part (see also Sweep 2008).

It follows from this that there are several abilities that students need to develop. These include the ability to identify standards and criteria; the ability to apply these to judgements of one's own work (informing ourselves) as well as to judgements of others' work (so informing them); the ability to understand the application of standards and criteria to one's own work *by others*; and, in this way, the ability to be informed by the judgements of others. Such abilities are dependent, to a large degree, on individuals' ability to be self-reflective.

Thus, with reference to the application of peer and self-assessment in the first year, one argument is that skills of self-reflection and learning are systematically less well developed in first-year students than in students who have reached later years, and therefore, that first-year students lack the requisite skills for peer and self-assessment (see, for example, Cassidy 2007; Gibbs 1995). Supporting this argument, both Boud (1991, 1995) and Biggs (2006), among others, have noted that some students are naturally more self-reflective than others. Similarly, when talking about peer *learning*, Boud, Cohen, and Sampson (2001) note that some students are more socially adept or networked than others, and that some are 'already effective learners' (3). If such differences are more pronounced (in the negative direction) among first-year students (itself a useful focus for future research – see for example Cassidy 2007, referred to later), they may not be regarded as good candidates for peer and self-assessment activities. If such views are widely held, whether they are valid or not, then this provides a partial explanation for the relative lack of research literature demonstrating the use of peer and self-assessment in the first year. Academics are unlikely to attempt peer or self-assessment activities with students who are regarded as unsuitable candidates for these techniques.

What follows mounts the argument that first-year students *are* capable of engaging in peer and self-assessment, and that they *should* be given the opportunity to develop and practice the associated skills through engagement in such activity.

Two meta-analyses by Boud and Falchikov (1989) (44 studies) and Falchikov and Boud (1989) (57 studies) found that students were reasonably accurate (Boud 1991, 3) in predicting the grades they would be given by academics. This is encouraging, but what about *first-year* students? Falchikov and Boud (1989) state that 'students in advanced courses [appear] to be more accurate assessors than those in introductory courses' (395). This finding is (on the face of it) less encouraging but is consistent with an intuitive presumption that in comparison to first-year students, students in more advanced courses would have more effectively integrated the knowledge, concepts, understandings and values of their profession (and its fully qualified



members). As a result, they *should* be able to make more accurate judgements of their performance and/or the performance of others. Despite its logical and intuitive appeal, however, Boud (1991) emphasised that this finding needs to be treated with caution and the findings in Falchikov (after a comprehensive review of the literature) are similarly circumspect (Falchikov 2004, 189, 251). What follows helps reveal some reasons why.

Van Hattum-Janssen and Lourenço (2006) reported on the use of peer-assessment with first-year engineering students. In this study, students' marks were significantly different from teacher's marks on four of the eight criteria (but, it is important to note, not significantly different on the other four). The authors explain that students were less accurate when attempting to make judgements on the four criteria that required 'a more profound knowledge of the course material that was not embedded explicitly in the criteria' (689). Thus, their suggestion is that first-year students are less able to exercise accurate judgements because of their less well-developed knowledge of the discipline about which they are judging, but that this is more evident in respect of some criteria than others, and that this can be largely overcome if students are given sufficient guidance.

Cassidy (2007) explicitly explored the ability of 'inexperienced' students to self-assess. His findings suggested that 'while self-assessment skill undoubtedly develops, becoming more effective during students' academic career, inexperienced students do have the capacity for self-evaluation and should therefore be included in self-assessment activities' (313).

Lending further support to this argument, Topping (1998) reported that a majority of studies in universities and colleges have found 'adequate reliability' (Topping and Ehly 1998, 259), with only a minority of studies reporting variable results. Furthermore, Topping and Ehly cite several studies that were conducted in *school* settings and that have found what they describe as 'encouraging consistency between peer and teacher assessments' (259).

Boud (1995) noted that 'most reported research up until the late 1960s was concerned with comparisons between the grades generated by students and those generated by their instructors' (3), and that this concern has continued at least into the 1970s. Given this, one might reasonably expect that if there was a meaningful difference between the accuracy of peer and self-assessments by first-year students and those by later year students, it would have been clearly demonstrated by now. As it stands, Falchikov and Boud's (1989) meta-analysis suggests that if there is any difference between the accuracy of first-year and later-year students' ratings, then the magnitude of that difference is minimal.

Further, as noted above, van Hattum-Janssen and Lourenço's (2006) paper suggests that students in the first year find only *some* judgements harder to make, and that they require specific help in learning how to make such judgements. Thus, a possible explanation for the pattern of research findings represented by the literature may be that later-year students are being asked to make more difficult judgements, and perhaps with less guidance. To learn to make such judgements is one key purpose of peer and self-assessment: as educators, we have the responsibility to teach students to function as professionals would, that is as a community of peers able to give and receive feedback and to evaluate their own work and that of others (Boud, Cohen, and Sampson 2001).

Two other notable papers relating explicitly to successful engagement of first-year students in assessment are those of O'Donovan, Price, and Rust (2004), and Rust,

Price, and O'Donovan (2003). These papers report on research that included large classes (300+) of undergraduate business students in their first term at university. These students participated in a 90-minute workshop in which their assessment of two pieces of work (from previous students) was then collectively discussed with academics and other students participating in the workshop. Citing their 2003 paper, O'Donovan, Price, and Rust (2004) state that their:

findings (replicated for 3 years) show students who undertake this optional marking workshop demonstrate a significant improvement in performance compared with those who do not, even though base line comparison of the performance of the two groups, undertaken prior to the intervention, shows no significant difference in performance (Rust, Price, and O'Donovan 2003). (333)

From the literature reviewed so far, it seems reasonable to conclude that an inability to make well-informed judgements may be taken as both a reason for not engaging in peer and self-assessment with first-year students *and as a justification for doing so*. In balancing these two, this literature suggests that the former has wielded greater influence, yet it is the latter which is the more responsible path. For example, John Heron (1988) has argued that the development of students' expertise and commensurate ability to exercise informed, accurate, reliable judgements that highly correlate with those of their professional peers is precisely what higher education should focus on, and that peer and self-assessment are critical vehicles by which this can be done.

Sadler's (1987) paper carries a comparable argument, specifically, that students as learners need to be able to see what is in the head of the professional judge. Only if the criteria and standards held by the professional judge, and only if the ways in which these are applied by that person are made public, can students interrogate, integrate, understand, internalise and apply them. Only then can this internalised understanding be effectively translated into informed action commensurate with the judgements of the original professional judge. What better way to accomplish this learning journey than to involve students in practicing the act of judging?

Thus, there is sufficient evidence to conclude that students in the first year can make judgements about their own performance, and that of their peers, and that they need to develop this skill from the very start of their academic programme of study. Starting small, early and simply, to build skills of judgement through practice is vital.

As Boud (1995) puts it:

the introduction [of student self-assessment] should be made at the earliest possible stage, and the skills practised thereafter, most desirably in a sequence of courses through the years of a program. (12)

Further comments in support of the early introduction of peer and self-assessment are made by Fullerton and Rafiq (1991) and Sher and Twigg (1991). These authors note that students' attitudes towards, and expectations of, assessment harden through their academic career.

### ***Issue 3: the relationship between pedagogic characteristics of first year and the use of peer and self-assessment***

The first questions here are: whether there are prevailing norms in respect of the functions of first-year university curricula, and if so, what would be the associated pedagogic



characteristics of the first year of university? Unfortunately, perhaps, it is doubtful that definitive answers to these questions can be found: programmes of study are uniquely designed and respond to a great diversity of competing factors. Thus, this paper proceeds in a more speculative manner by first considering *hypothetical* models of a first-year curriculum and the suitability of peer and self-assessment within each.

### *Hypothetical models for a first-year curriculum*

Some first-year curricula might focus on *content acquisition* – a preparatory year aiming to equip students with the prerequisite base knowledge to progress with a more meaningful and valuable study of their discipline. Within such an approach, it might be argued that the first year would not involve any need for peer or self-assessment because students would not be required to evaluate what they are learning, but merely to assimilate and accumulate. However, there is (surely) a limited scope for *higher* education programmes to proceed on the basis of arguments such as these. An alternate argument may also be made: that for students to be successful in developing an understanding of foundational discipline knowledge, peer and self-assessment are critical components, as these engage students from the outset in a process that inducts them into a culture of critical scholarly enquiry.

Another possible model for the first year in higher education may be that it is a year designed to ensure that all students develop the necessary prerequisite *study skills* for academic progression. In a model such as this, there might be somewhat lesser demands in respect of learning discipline content. In principle at least, such a year would be relatively unimportant so far as the academic discipline of study is concerned. As such, it might be argued that it would not be necessary or appropriate for marks/grades from this year to contribute directly to the overall degree grade. Assessment (of discipline content learning) would come later, and so too (perhaps) would peer and self-assessment. Again, however, an alternate argument may be made: that learning of study skills benefits just as much from peer and self-assessment as learning anything else, and that it is important to establish a community of reflective practice early in order to make more optimal use of peer and self-assessment of discipline-focused matters later in the programme of study.

What these hypothetical models serve to show is that they do not progress us far in determining whether pedagogical features of study in the first year, even in principle, relate to the suitability of the use of peer and self-assessment in the first year.

An alternative way to explore this issue might be to consider a pedagogical philosophy that would provide a justification for the incorporation of peer and self-assessment from the outset of students' study. One such philosophy might be to consider a university education as a developmental continuum. In this vein, Mosston and Ashworth (1986) describe a teaching/learning model with high levels of teacher control at the beginning of a programme of study and high levels of learner control later. Under such a scheme, it might be argued that there would be progressively more scope for peer and self-assessment as a course of study progresses, and conversely, that there is little scope for them at the beginning.

If one is to use peer and self-assessment, when should one start? Fazey (1993) not only makes a good argument for explicitly seeking to assist students with the acquisition of self-assessment skills (stating that these are vital if learners are to progress successfully) but also, more importantly, argues that developing peer and self-assessment skills should begin from the very beginning of a course of study

(where the existence of such skills is least likely and assistance with their development most needed). As self-assessment skills progressively develop, ‘the learner [can be] given more responsibility for his or her own learning effectiveness’ (Mosston and Ashworth 1986, 158). While these authors talk only about self-assessment, it is timely to remind ourselves of the argument presented earlier that self-assessment is informed by peer-assessment and vice versa. Repeating Boud: ‘We live alongside others in community with them and share common cultures and values’ (1995, 15).

To conclude this section, as John Heron (1988) argued, we should show respect for learners’ intellectual capacities of reasoning and should actively commit to mutually engaging ways to share in the development of knowledge, understanding and skills. These are the sentiments echoed by other writers (e.g. Boud, Cohen, and Sampson 2001) and are consistent with the need to develop graduates who can function in a world that presents increasingly unknowable future possibilities, for which more generic capabilities will be required (Bowden and Marton 2003, 129). In this regard, embracing notions of peer-learning (Boud, Cohen, and Sampson 2001), including peer and self-assessment, is pivotal to effective engagement of learners in ‘moving beyond independent learning to *interdependent* learning’ (Boud, Cohen, and Sampson 2001, 3). It follows from this argument and the evidence presented that there appears to be minimal pedagogical impediment to the use of peer and self-assessment in the first year of tertiary study, but a strong imperative to do so.

## Discussion

Throughout this paper, benefits of peer and self-assessment to students have been implicitly mentioned. However, it serves the discussion well to bring some of these to the fore.

It has been noted that both peer and self-assessment involve students in the identification of criteria for judging work and making judgements using those criteria. These assessments of learning skills are also notably beneficial to learning. But, more than this, they are also beneficial as learning outcomes in their own right. This means that they do not simply empower *students* in their learning, but they empower professional practice and ongoing learning after graduation. Peer and self-assessment practices are the practices that learners integrate into their ways of thinking and doing and take forward through their lives. They support the exchange of ideas, values and culture, provide multiple perspectives and insights that an individual alone could not self-generate, and they help to inform judgement by acting as a vehicle that helps induct students into, create and participate in, a community of critical scholarly enquiry (Boud, Cohen, and Sampson 2001; Falchikov 2004).

Using peer and self-assessment is associated with a long list of other benefits. For example, when reporting on a study about assessment strategies in Scottish Higher Education, Falchikov (1991, 15) noted that the most frequently mentioned benefits to be derived from involving students in assessment (an axiomatic component of peer and self-assessment) were ‘skills development’. These included group-working skills, interpersonal skills, organisational skills and listening skills – also mentioned were an improvement in the speed and utility of feedback, increased student autonomy, more independence, greater responsibility for learning, higher enthusiasm, and motivation. The benefits somewhat lower on the list, but of high value, were increased student confidence, understanding, reflection and intellectual development. A comprehensive

listing of benefits, and references to the associated research, is tabulated by Falchikov (see Falchikov 2004, 114–6).

Pond and ul-Haq (1991) mentioned that peer and self-assessment led to benefits from peer pressure (promoting participation in group work activities). Mindham (1991), citing Race (1993) (among others), argued that assessment, but particularly peer and self-assessment, axiomatically promotes a deep approach to learning because, as Race puts it:

The very act of assessing is intrinsically ‘learning by doing’ – it involves the application of criteria, decision making, judgement and reflection. In other words, assessing *is* a ‘deep’ activity. (Race 1993, Emphasis added).

All these benefits are echoed by many other studies (Falchikov 2004). Equally, however, these are benefits that are not automatic. Students themselves sometimes report feeling apprehensive about peer and self-assessment because they do not feel that they are trained to assess (Sher and Twigg 1991). Many academics feel the same way: ‘When implementing peer and self-assessment, student ownership of the assessment criteria has been found to be fundamentally important’ (Pond and ul-Haq 1991, 25). More than this, students need to develop their understanding of the assessment criteria and to accumulate experience through practice so that they come to possess the knowledge (explicit and tacit) necessary for being able to make judgements using these criteria (O’Donovan, Price and Rust 2004; Ritter 1991; Rust, Price, and O’Donovan 2003). This is particularly the case for those criteria that involve more profound knowledge of course material (van Hattum-Janssen and Lourenço 2006).

These are no small matters – at any stage of a programme of study – but are likely to be perceived to be (and to actually be) more difficult in first-year courses in which class sizes are generally much larger and students inevitably less experienced in the tertiary study environment.

Despite this, Cassidy (2007), like Heron (1981, 1988), has argued convincingly that inexperienced students have the capacity to self-evaluate and to use this to guide their learning. Accordingly, these authors argue that inexperienced students should be included in such activities. At the school level, a recently published study by Hattie (2009), which involved the synthesis of 815 meta-analyses of education research, has placed students assessing themselves at the top of a list of 138 possible approaches to raising student achievement (Mansell 2008). Others have shown that such students are fairly accurate in their judgements (Boud and Falchikov 1989; Falchikov and Boud 1989; Topping 1998; Topping and Ehly 1998). To this can be added the proposal that the introduction of peer and self-assessment is beneficial in the first year ‘before expectations are too entrenched’ (Fullerton and Rafiq 1991, 69), and that because:

Students [are] more receptive to the novel aspects of peer-assessment in the earlier years of studies...peer-assessment needs to be incorporated into the assessment culture of a degree...at an early stage...if it is to be successful. (Sher and Twigg 1991, 104)

More fundamentally, Boud has argued that ‘the development of skills in self-assessment lies at the core of higher education’ (Boud 1991, 1). This sentiment was also expressed by Black and William (1998) in an extensive review of literature about formative and self-assessment in which they argued that ‘self-assessment is a sine qua non for effective learning’ (26) and, as such, is ‘not an interesting option or luxury: it has to be seen as essential’ (54–5). Similarly, Sadler (1998, 82) has argued that ‘some

of what the teacher brings to the assessment act must itself become part of the curriculum for the student, not an accidental or inconsequential adjunct to it'. Furthermore, such activity should not be confined *only* to the first year. Boud (1995), and McDonald and Boud (2003, 210) have argued that the literature on self-assessment 'suggests that the formal development of self-assessment skills is an important part of the curriculum at all levels'. Supporting this, O'Donovan, Price, and Rust (2004) cogently argue for a conceptual model of assessment in which 'processes such as dialogue, observation, practice and imitation' (including peer and self-assessment) are used 'to share tacit understanding of assessment requirements' (332) and:

that inviting students into the marking process can mean that assessment broadens out from merely the assessment *of* learning to become an effective learning tool in its own right, facilitating assessment *for* learning. Thus, 'enabling students to fully understand their own learning and the goals they are aiming for'. (Elwood and Klenowski 2002, 244)

As Fazey (1993) asked:

What more could be asked of a higher education system than that it enables people to become skilled learners with control over their own learning, appropriately assessing personal need and applying strategies for progress? (342)

## Conclusion

This paper has shown that there are many studies in which peer and self-assessment have been successfully used in first-year university courses. It has also made reference to the many potential, if not likely, benefits that can accrue from doing so, as well as presenting the argument that these activities lie at the core of higher education. By implication alone, the use of peer and self-assessment in the first year is justified.

However, this paper has also argued that relatively few studies explicitly concern themselves with the application of peer and self-assessment in first-year courses and with first-year students – remaining mostly silent on aspects of first-year courses and/or students that make peer and self-assessment more or less suitable. As such, they only indirectly illustrate the suitability of peer and self-assessment in this context. This paper has begun an exploration of some of the related issues. By doing so, it has explored some reasons for using peer and self-assessment and some difficulties that may be expected – particularly in respect of the first year. It has argued that the use of peer and self-assessment in first-year university courses is supportive of a developmental learning imperative to which educational programmes should respond, and therefore that there should be greater use of peer and self-assessment in the first year of higher education – and onwards. Although that in itself may not appear new, the explicit focus on the first year introduced in this paper is. In particular, this paper has argued that the imperative to use peer and self-assessment early in students' university careers, and the benefits of doing so, outweigh impediments and arguments to the contrary.

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### References

- Anderson, G., and D. Boud. 1996. Extending the role of peer learning in university courses. *Research and Development in Higher Education* 19: 15–19.
- Andrade, H., and Y. Du. 2007. Student responses to criteria-referenced assessment. *Assessment & Evaluation in Higher Education* 32, no. 2: 159–81.
- Ballantyne, R., K. Hughes, and A. Mylonas. 2002. Developing procedures for implementing peer assessment in large classes using an action research process. *Assessment & Evaluation in Higher Education* 27, no. 5: 427–41.
- Berg, Ineke van den, W. Admiraal, and A. Pilot. 2006. Peer assessment in university teaching: Evaluating seven course designs. *Assessment & Evaluation in Higher Education* 31, no. 1: 19–36.
- Biggs, J.B. 2006. *Teaching for quality learning at university*. 2nd ed. Maidenhead: Open University Press.
- Black, P., and D. William. 1998. Assessment and classroom learning. *Assessment in Education* 5, no. 1: 7–74.
- Bloxham, S., and A. West. 2004. Understanding the rules of the game: Marking peer assessment as a medium for developing students' conceptions of assessment. *Assessment & Evaluation in Higher Education* 29, no. 6: 721–33.
- Bloxham, S., and A. West. 2007. Learning to write in higher education students' perceptions of an intervention in developing understanding of assessment criteria. *Teaching in Higher Education* 12, no. 1: 77–89.
- Boud, D. 1979. Student control of assessment: Some early investigations in self and peer assessment. Proceedings of the 5th International conference on improving university teaching, July 4–7, in London. pp. 660–9.
- Boud, D., ed. 1981. *Developing student autonomy in learning*. London: Kogan Page.
- Boud, D. 1991. *Implementing student self-assessment*. 2nd ed. Campbelltown: The Higher Education Research and Development Society of Australasia (HERDSA).
- Boud, D. 1995. *Enhancing learning through self-assessment*. London: Kogan Page.
- Boud, D. 1998. Assessment and learning – Unlearning bad habits of assessment. Paper presented at the effective assessment at university conference, The University of Queensland, November 4–5, in Queensland, Australia.
- Boud, D. 1999. Avoiding the traps: Seeking good practice in the use of self-assessment and reflection in professional courses. *Social Work Education* 18, no. 2: 121–32.
- Boud, D., and A. Brew. 1995. Developing a typology for learner self-assessment practices. *Research and Development in Higher Education* 18: 130–5.
- Boud, D., R. Cohen, and J. Sampson. 2001. *Peer learning in higher education*. London: Kogan Page.
- Boud, D., and N. Falchikov. 1989. Quantitative studies of student self-assessment in higher education: A critical analysis of findings. *Higher Education* 18: 529–49.
- Boud, D., and N. Falchikov, eds. 2007. *Rethinking assessment for higher education: Learning for the longer term*. London: Routledge.
- Boud, D., and W.H. Holmes. 1981. Self and peer marking in an undergraduate engineering course. *IEEE Transactions on Education* E-24, no. 4: 267–74.
- Boud, D., and A.L. Tyree. 1979. *Self and peer assessment in professional education: A preliminary study in law* (TERC research and development paper no. 55). Sydney: Tertiary Education Research Centre, University of New South Wales.



- Bowden, J., and F. Marton. 2003. *The university of learning: Beyond quality and competence in higher education*. 2nd ed. London: Routledge.
- Cassidy, S. 2007. Assessing 'inexperienced' students' ability to self-assess: Exploring links with learning style and academic personal control. *Assessment & Evaluation in Higher Education* 32, no. 3: 313–30.
- Cassidy, S., and A. Weinberg. 2005. *What university students think about peer assessment – Developing employability skills*. Manchester: University of Salford, Education Development Unit.
- Cheng, W., and M. Warren. 1997. Having second thoughts: Student perceptions before and after a peer assessment exercise. *Studies in Higher Education* 22, no. 2: 233–7.
- Elwood, J., and V. Klenowski. 2002. Creating communities of shared practice: The challenges of assessment use in learning and teaching. *Assessment & Evaluation in Higher Education* 27: 243–56.
- Falchikov, N. 1991. Involving students in feedback and assessment: A report from the Assessment Strategies in Scottish Higher Education (ASSHE) project. In *Peer assessment in practice*, ed. S. Brown, 9–22. Birmingham: Staff and Educational Development Association.
- Falchikov, N. 1995. Peer feedback marking: Developing peer assessment. *Innovations in Education and Training International* 32, no. 2: 175–87.
- Falchikov, N. 2004. *Improving assessment through student involvement: Practical solutions for aiding learning in higher and further education*. London: RoutledgeFalmer.
- Falchikov, N., and D. Boud. 1989. Student self-assessment in higher education: A meta-analysis. *Review of Educational Research* 59: 395–430.
- Falchikov, N., and J. Goldfinch. 2000. Student peer assessment in higher education: A meta-analysis comparing peer and teacher marks. *Review of Educational Research* 70, no. 3: 287–322.
- Fazey, D.M.A. 1993. Self-assessment as a generic skill for enterprising students: The learning process. *Assessment & Evaluation in Higher Education* 18, no. 3: 235–50.
- Fullerton, H., and Y. Rafiq. 1991. Lessons from coming of age in peer assessment and group work. In *Peer assessment in practice*, ed. S. Brown, 67–78. Birmingham: Staff and Educational Development Association.
- Gayle, K., K. Martin, and G. McQueen. 2002. Triadic assessment. *Assessment & Evaluation in Higher Education* 27, no. 6: 557–67.
- Gibbs, G. 1995. *Assessing student centered courses*. Oxford: Oxford Brookes University.
- Gruppen, L., J. Garcia, C.M. Grum, J.T. Fitzgerald, C.A. White, L. Dicken, J.C. Sisson, and A. Zweifler. 1997. Medical students' self-assessment accuracy in communications skills. *Academic Medicine* 72, Suppl. 10: S57–9.
- Hafner, J., and P. Hafner. 2003. Quantitative analysis of the rubric as an assessment tool: An empirical study of student peer-group rating. *International Journal of Science Education* 25, no. 12: 1509–28.
- Hattie, J.A.C. 2009. *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Abingdon: Routledge.
- Heron, J. 1981. Self and peer assessment. In *Management self-development*, ed. T. Boydell and M. Pedler. Farnborough: Gower.
- Heron, J. 1988. Assessment revisited. In *Developing student autonomy in learning*, 2nd ed. D. Boud, 77–90. London: Kogan Page.
- Lejk, M., and M. Wyvill. 2001a. Peer assessment of contributions to a group project: A comparison of holistic and category-based approaches. *Assessment & Evaluation in Higher Education* 26, no. 1: 61–72.
- Lejk, M., and M. Wyvill. 2001b. The effect of the inclusion of self-assessment with peer-assessment of contributions to a group project: A quantitative study of secret and agreed assessments. *Assessment & Evaluation in Higher Education* 26, no. 6: 551–61.
- Lejk, M., and M. Wyvill. 2002. Peer assessment of contributions to a group project: Student attitudes to holistic and category-based approaches. *Assessment & Evaluation in Higher Education* 27, no. 6: 569–77.
- Liu, N.-F., and D. Carless. 2006. Peer feedback: The learning element of peer assessment. *Teaching in Higher Education* 11, no. 3: 279–90.
- Magin, D.J. 1993. Should student peer ratings be used as part of summative assessment? *Research and Development in Higher Education* 16: 537–42.



- Magin, D.J. 2001a. A novel technique for comparing the reliability of multiple peer assessments with that of single teacher assessments of group process work. *Assessment & Evaluation in Higher Education* 26, no. 2: 139–52.
- Magin, D.J. 2001b. Reciprocity as a source of bias in multiple peer assessment of group work. *Studies in Higher Education* 26, no. 1: 53–63.
- Magin, D.J., and A.E. Churches. 1988. What do students learn from self and peer assessment? In *Designing for learning in industry and education*, ed. J. Steele and J.G. Hedberg, 224–33. Canberra: Proceedings of EdTech'88, AJET Publications.
- Magin, D.J., and P. Helmore. 2001. Peer and teacher assessments of oral presentation skills: How reliable are they? *Studies in Higher Education* 26, no. 3: 287–98.
- Mansell, W. 2008. *Pupil-teacher interaction*. <http://www.tes.co.uk/article.aspx?storycode=6005411> (accessed September 5, 2001).
- McDonald, B., and D. Boud. 2003. The impact of self-assessment on achievement: The effects of self-assessment training on performance in external examinations. *Assessment in Education* 10, no. 2: 209–20.
- Mindham, C. 1991. Peer assessment: Report of a project involving group presentations and assessment by peers. In *Peer assessment in practice*, ed. S. Brown, 45–66. Birmingham: Staff and Educational Development Association.
- Mok, M.M.C., C.L. Lung, D.P.W. Cheng, R.H.P. Cheung, and M.L. Ng. 2006. Self-assessment in higher education: Experience in using a metacognitive approach in five case studies. *Assessment & Evaluation in Higher Education* 31, no. 4: 415–33.
- Mosston, M., and S. Ashworth. 1986. *Teaching physical education*. London: Merrill.
- O'Donovan, B., M. Price, and C. Rust. 2004. Know what I mean? Enhancing student understanding of assessment standards and criteria. *Teaching in Higher Education* 9, no. 3: 325–35.
- Orsmond, P., S. Merry, and A. Callaghan. 2004. Implementation of a formative assessment model incorporating peer and self-assessment. *Assessment & Evaluation in Higher Education* 41, no. 3: 273–90.
- Orsmond, P., S. Merry, and K. Reiling. 1996. The importance of marking criteria in the use of peer assessment. *Assessment & Evaluation in Higher Education* 21, no. 3: 239–50.
- Orsmond, P., S. Merry, and K. Reiling. 1997. A study in self-assessment: Tutor and students perceptions of performance criteria. *Assessment & Evaluation in Higher Education* 22, no. 4: 357–68.
- Orsmond, P., S. Merry, and K. Reiling. 1998. The role of peer observation of teaching within a changing higher education culture. Paper presented at the higher education close up – conference proceedings, July 6–8, in University of Central Lancashire, Lancashire, UK.
- Orsmond, P., S. Merry, and K. Reiling. 2000. The use of student derived marking criteria in peer and self-assessment. *Assessment & Evaluation in Higher Education* 25, no. 1: 23–38.
- Orsmond, P., S. Merry, and K. Reiling. 2002. The use of exemplars and formative feedback when using student derived marking criteria in peer and self-assessment. *Assessment & Evaluation in Higher Education* 27, no. 4: 309–23.
- Pond, K., and R. ul-Haq. 1991. Assessing using peer review. Adopting the learning benefits of peer review and mitigating the potential learning disbenefits of pure peer assessment through design and structure. In *Peer assessment in practice*, ed. S. Brown, 23–44. Birmingham: Staff and Educational Development Association.
- Race, P. 1993. *Never mind the teaching – Feel the learning*. Birmingham: Staff and Educational Development Association. Paper 80.
- Ritter, L. 1991. Peer assessment: Lessons and pitfalls. In *Peer assessment in practice*, ed. S. Brown, 79–86. Birmingham: Staff and Educational Development Association.
- Rust, C., M. Price, and B. O'Donovan. 2003. Improving students' learning by developing their understanding of assessment criteria and processes. *Assessment & Evaluation in Higher Education* 28, no. 2: 147–64.
- Sadler, D.R. 1987. Specifying and promulgating achievement standards. *Oxford Review of Education* 13: 191–209.
- Sadler, D.R. 1998. Formative assessment: Revisiting the territory. *Assessment in Education* 5, no. 1: 77–84.
- Sher, W.D., and D.R. Twigg. 1991. Peer assessment – A construction 'Tool'? In *Peer assessment in practice*, ed. S. Brown, 87–105. Birmingham: Staff and Educational Development Association.

- Sweep, T. 2008. Integrity and the expanded self. Unpublished Masters diss., The University of Queensland.
- Topping, K. 1998. Peer assessment between students in colleges and universities. *Review of Educational Research* 68, no. 3: 249–76.
- Topping, K., and S. Ehly. 1998. *Peer assisted learning*. London: Lawrence Erlbaum.
- van Hattum-Janssen, N., and J.M. Lourenço. 2006. Explicitness of criteria in peer assessment processes for first-year engineering students. *European Journal of Engineering Education* 31, no. 6: 683–91.
- van Hattum-Janssen, N., J.A. Pacheco, and R.M. Vasconcelos. 2004. The accuracy of student grading in first-year engineering education. *European Journal of Engineering Education* 29, no. 2: 291–8.
- Vu, T.T., and G. Dall’Alba. 2007. Students’ experience of peer assessment in a professional course. *Assessment & Evaluation in Higher Education* 32, no. 5: 541–56.