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Assessment and the Promotion of Academic Values

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ABSTRACT *This paper raises issues concerning the relationship between student assessment and the values which academic institutions propagate. It argues that many current assessment practices are incompatible with the goals of independence, thoughtfulness and critical analysis to which most academics would subscribe; that forms of assessment which are commonplace are not consistent with the behaviour of academics in their own contributions to knowledge; and that there is evidence to suggest that the assessment policy of many departments undermines deep approaches to learning on the part of students. Some indications are given of possible strategies to address the problems which have been identified, drawing upon ideas from academic and professional practice in general and self-assessment and peer review in particular.*

Introduction

Following the great flurry of debate about student assessment in higher education in the 1960s and 1970s, the 1980s have been relatively quiet. While there are always discussions within departments about particular aspects of assessment, there has been little general questioning of how and why we assess. This is in striking contrast to secondary education, where major debates are taking place about the use of student profiles, criterion tests and examination systems. Can we infer from this that all is satisfactory in the realm of assessment in higher education? Are the problems purely technical ones which we can resolve when we have greater knowledge? My answers are that we certainly cannot be sanguine about our assessment practices, that the problems are fundamental, not technical, and that discussions of such issues as competent practice and academic freedom bring some of these problems to our attention.

The starting point for this paper is provided by the following perceptions.

(1) There is often a gap between what we do in teaching as academics and what we do in other aspects of our professional practice. This is particularly marked in our approach to assessment. We place a high value on critical analysis in our own work, but we are in general uncritically accepting of our assessment practices.

(2) There is often a gap between what we require of students in assessment tasks and what occurs in the world of work, whether it be in the public sector, commerce or industry, or academia. Regrettably, there is still a great emphasis placed on memorisation and working under unlikely time constraints. It may be that there are arguments to be made about the special features of learning compared with the world of work, which would justify this difference. If so, they do not feature highly in typical discussions of assessment practices and, when they do, they often present unrealistic caricatures of the world of work, portraying it as narrow and technical (compared with the enriching life of learning!).

(3) There is often a gap between what we encourage students to focus upon and what is needed for meaningful learning to occur. There is too often a discrepancy between the high-level course objectives and assessment tasks, which require the reproduction of standard forms of argument, and the positions taken by lecturers. Meaningful learning is more likely to occur when students engage with the subject matter for its own sake, not for that of an extrinsic demand.

We need to examine assessment practices to see if they are compatible with our academic ideals and, more generally, our goals for higher education. I suspect that we might find that we have been guilty of 'don't do what I do, do what I say' on quite a large scale. The reasons for these discrepancies are many and varied, but in all cases, there is an obligation on us to ensure that our assessment practices do not contradict our educational values.

In this paper, I intend to identify the main purposes of student assessment, briefly mention some of the evidence for fundamental problems in assessment practices and discuss how the work of academics and other professionals is assessed. This will lead to a consideration of alternative approaches to assessment which move in the direction of greater authenticity and responsibility for students, and which begin to bridge some of the gaps which have been identified. In doing so I do not intend to discuss particular methods, as the methods in themselves are less important than the role of assessment in courses. I do not pretend to address all the problems of assessment to which I have referred, merely to point to a few directions which might prove fruitful. In doing so, I do not wish to dismiss lightly the importance of that part of a higher education which involves bringing a student to the front line of current discourse in a given discipline. This may involve a tightly defined regime which involves the systematic presentation of the discipline, of ways in which problems have been posed and characteristic approaches and. styles of argument. There is certainly a role for this. However, I think we delude ourselves if we believe that all that occurs in a higher education should take this form. Such an approach contributes little to the development of skills of issue clarification and problem formulation in areas which do not fall immediately within the·remit of the given discipline-issues of the very type which students are likely to confront outside the discipline boundaries in the external world. Neither does it necessarily equip students to work independently of

teachers and use textbooks for their own ends, which may not coincide with those of their teachers. One does not have to subscribe to current fashions of enterprise culture to recognise that the induction-into-a-discipline approach does not hold a monopoly on worthwhile educational goals. It has an important place, but not necessarily a dominant one.

Assessment and Learning

There are two main purposes of student assessment. The first intends to improve the quality of learning. Students engage in the problems and discourse of a given area and are given encouragement, response and feedback on what they do, as appropriate, with a view to them becoming more effective in their learning. This is formative assessment, or assessment for learning. The second concerns the accreditation of knowledge or performance: students are assessed to certify their achievements. This occurs primarily for the award of a degree or diploma, though various components of assessment are usually taken into account in making this judgement. This is summative assessment, or assessment for the record.

In both cases judgement is involved, but in the first it directly serves the needs of the student and in the second it primarily serves the needs of the external world. Assessment also contributes to motivation through the recognition of achievement. However, the relationship between certification and motivation is a complex one. For as many high- achieving students who are encouraged and stimulated by their high grades, there are others who are discouraged and alienated by their lesser grades. Grading *per se* is not a motivator and can only be used as such with very great care in any given situation. Assessment is also used for various administrative reasons, such as for the allocation of students to particular groups, but I regard these as secondary purposes.

Students tend not to learn well if we are not effective in the former, and they cannot be recognised as competent if we neglect the latter. Unfortunately, resource pressures increasingly lead us to protect assessment for accreditation at the expense of assessment for learning. Learning is so driven by assessment that the form and nature of assessment often swamps the effect of any other aspect of the curriculum.

While there may not be a current public debate about assessment, over the past 20 years an interesting literature has been emerging in higher education on the relationship between assessment and learning. It is not the place here to review it in great detail, but research has shown the following features.

(1) Students are assessed on those matters on which it is easy to assess them, and this leads to an over-emphasis on memory and lower-level skills (e.g. Black, 1969). Creating questions which test higher order skills is not impossible, but it demands a degree of professional commitment to test design which is absent from many departments.

(2) Assessment encourages students to focus on those topics which are assessed at the expense of those which are not (e.g. Elton & Laurillard, 1979). In other words, assessment tasks define the syllabus, and, if students want to get good marks, they focus on these aspects at the expense of others which might capture their interest.

(3) The nature of assessment tasks influences the approaches to learning which students adopt (e.g. Ramsden, 1988). Not only does the content of assessment define what is to be studied, but also the kind of task required shapes the learning strategy of students. If students perceive reproduction of information to be rewarded, they will emphasise memory work, and if they see problem-solving emphasised, they will tend to practise solving problems.

(4) Students who perform well in university examinations can retain fundamental misconceptions about key concepts in the subjects they have passed (e.g. Dahlgren, 1984). Some of the most profoundly depressing research on learning in higher education has demonstrated that successful performance in examinations does not even indicate that students have a good grasp of the very concepts which staff members believed the examinations to be testing.

(5) Students give precedence to assessment which is graded (e.g. Becker *et al.,* 1968). Grading acts as a kind of currency indicating what teachers value. It is in the best interests of students to focus on those things which produce the greatest return.

(6) Successful students seek cues from teachers to enable them to identify what is important for formal assessment purposes (e.g. Miller & Parlett, 1974). Effective performers often use the strategy of attending lectures in order to obtain cues about what of the vast range of matters in a given subject will be emphasised in examinations. They focus their energies on these and may spend significantly less time in studying than their less successful peers.

The picture painted by this research is bleak. Despite the good intentions of staff, assessment tasks are set which encourage a narrow, instrumental approach to learning that emphasises the reproduction of what is presented, at the expense of critical thinking, deep understanding and independent activity.

These findings indicate effects which are quite contrary to those which are sought. Students are discouraged from taking initiatives beyond their teacher's interpretation of the syllabus, and they spend their time 'swotting for examinations' rather than trying to internalise and make sense of the subject. Evidence such as this suggests that very great care must be exercised in the selection and implementation of assessment tasks, otherwise they can have counter-productive results.

Problems with existing assessment practices do not stop there. All of this research has taken place in the context of assessment in which staff decide on the aims and objectives, the assessment tasks, the criteria for judgement and the final outcomes of the process. This unilateral assessment has other intrinsic consequences and limitations. In particular, it can obstruct the attainment of one

of the common goals of higher education-that students should become autonomous learners who can take responsibility for their own learning, i.e. they are self-determining. As Heron puts it:

> Unilateral control and assessment of students by staff mean that the process of education is at odds with the objective of that process. I believe the objective of the process is the emergence of an educated person: that is a person who is self-determining who can set his *[sic]* own learning objectives, devise a rational programme to attain them, set criteria of excellence by which to assess the work he produces, and assess his own work in the light of these criteria-indeed all that we attribute to and hope from the ideal academic himself. But the traditional educational process does not prepare the student to acquire any of these self-determining competencies. In each respect, the staff do it for or to the students. An educational process that is so determined by others cannot seriously intend to have as its outcome a person who is truly self-determining. (Heron, 1988, pp. 57-58)

Perhaps it is not a legitimate goal for students to_ become 'truly self-determining', but it is for them to be able to exercise the abilities set out by Heron. If not, then we are undertaking a narrow training which will not equip students to continue their learning after graduation and contribute effectively in areas which have not been covered in the curriculum. If students learn to look always to their teachers to identify the objectives of their study, appropriate tasks to tackle and criteria for judgement, they are learning to be dependent. They are not encouraged to develop the skills of learning how to learn, how to monitor their own work, how to establish their own criteria and how to make judgements about the worth of their achievements, all of which are necessary elements of professional practice. Of course, very good students do manage to develop these skills quite independently of what teachers do, but most can end up graduating with learning difficulties which will inhibit their continuing education and upgrading of skills.

If present unilateral forms of assessment have these dangers and limitations, we might perhaps look outside the immediate teaching context. Such an investigation might throw light on the directions that student assessment might take. Recent research on cognition suggests that knowledge is situated, being in part a product of the activity, context and culture in which it is developed and used (Brown *et al.,* 1989). Learning which is abstracted from situations in which it is used is of limited effectiveness, and assessment tasks which are a product of the culture of undergraduate teaching can contribute poorly to the requirements of knowledge in context.

Assessment of Academic and Professional Work

Existing assessment practices might be more defensible if they could bear some relationship to the ways in which academic and other professional work is

assessed in actual working environments and the situations in which knowledge is to be used. However, this is far from being the case. Take the case of academic work as an example. An instance is the production of a scientific paper.

The outcome for a scientist after having had an idea and worked it through, read the work of others and perhaps investigated the problem experimentally, would be the sketch for or the first draft of a scientific paper. This might be shown to close colleagues, or research students, who might offer comments or suggestions. Additional calculations might be done and additional analysis undertaken. Further refinement of the paper might occur and then, depending on the discipline, sent to colleagues in other institutions who were working in similar areas. After feedback from all these sources and suitable modification a paper might be prepared which the author thought good enough to submit to a journal. The paper would go through the normal peer review process, and comments by a number of referees would be provided to the journal editor, who would then write either accepting the paper, requiring further rewriting in the light of referees' comments, or rejecting it. The paper would then be published and recorded in the curriculum vitae of the author.

This is a somewhat idealised version of paper writing which does not apply in all disciplines. It is sufficiently familiar, though, in the sciences, to form the basis of an analysis of what is occurring in this process.

We see that the assessment of this work was undertaken by the author, by sympathetic colleagues and by external peers with special expertise. Emphasis was on self-assessment at each stage (the author took decisions about changes to be made, what advice to accept and what to reject), peer review (both informal and formal), the cycling of one piece of work through many stages (papers are normally revised until they are satisfactory, not dropped and another started), and there was plenty of good quality feedback and much opportunity for revision. Most of the learning for the author took place before the formal part of the process, and the role of the external judges was to provide an additional and formal assurance of quality and suggestions for improvement. Summative assessment occurred as the final stage in a process which was extensively formative. We know that in practice the final acceptance rate for scientific papers is very high (unlike subjects like philosophy or sociology where, perhaps, the role of the form of argument is greater) (Gordon, quoted in Hartley, 1978).

We should be cautious in taking this analogy too far. I do not wish to assume that we have a model here which we should follow. The writing of a scientific paper does not occur as a result of teaching, and the context of science practice may account for many of the features described. However, it does result from learning, and it is the act which validates the results of learning. The question which arises is: does assessment exist primarily to serve the needs

of teaching or of learning? We cannot assume that the two are equivalent. To treat assessment as essentially a subset of the teaching process is to adopt a potentially limiting stance, as in the higher education context there are few of the checks and balances which allow us to ensure that argument and the use of evidence are being assessed rather than conformity with the views of lecturers or tutors. I do not wish to imply that there is any conscious attempt to constrain the learner, merely that it is easy for students to believe that their immediate interests are best served by so doing.

The processes involved in producing an academic publication, described above, are not untypical of other professions, although there are huge variations in practice. Similar processes occur to a greater or lesser extent in engineers designing new structures, lawyers preparing a brief, doctors confronting an unusual problem, and so on. There is considerable informal peer feedback (particularly now with the decline of the sole practitioner) and an emphasis on self-assessment. Even when there is an external judge in the form of a client, the client's judgements often do not go into the detail of professional work, only into the implications of that work from the client's own perspective. Some professions, for example teaching, work in relative isolation, and self-assessment uninformed by others is almost the only form of assessment.

This process of self-assessment and peer review with cycles of feedback and reworking until a satisfactory piece of work is produced is very different from the process by which we normally assess the work of students in undergraduate courses. It is not, however, significantly different from some of the proposals arising from research on student learning which involve cycles of writing and rewriting (e.g. Hounsell, 1984; Taylor *et al.,* 1988). The issue for students is not just one of an ineffective transition between course and employment. The present gap between standards of behaviour in the two contexts has a potentially debilitating influence on academic and professional practice. It is not good training even for the future scholar, as

> ... the student absorbs the whole authoritarian educational process, and those students who go on to become future staff reproduce the unilateral model with remarkable lack of critical acumen and awareness. It is notorious that academics, who normally would pride themselves on their ability critically to evaluate the assumptions on which a body of theory and practice is based, are so uncritical and unthinking about the educational process which they mediate. (Heron, 1988, p. 58)

Of course, the relationship between authority and independence is more complicated than the quotations from Heron imply, and it would be naive to overreact by shifting to a situation in which staff deny their expertise and accept whatever students want. Heron would regard this as a misreading of his critique. What is pointed to, however, is the unhealthy dominance of a situation where staff are always both an authority and in authority. The challenge is to find a place

for significant student responsibility in this context.

Principles of academic practice which might be taken into account in processes of assessment include:

- critical evaluation of sources and ideas, scepticism of authority, questioning over acceptance;
- judgement (collective) by peers rather than supervisors;
- search for meaning and understanding: process often more important than product;
- work to be self rather than other directed;
- personal responsibility for authenticity (although, say, while scientific findings should in principle be reproducible, it is often impossible to do so in the specifics).

Present approaches deal better with what is manifest in the products of academic work than with processes. If the principles are important ones, should not the process of education be such that they are reinforced? I do not wish to argue that the familiar assessment methods are undesirable in themselves, but instead, that an exclusive focus on them neglects significant aspects of academic work and distorts the learning process.

Just because academics operate amongst themselves in a given fashion does not necessarily imply that they should follow that model in their own training or that of their students. (However, it does not suggest that it should be otherwise, either.) It may be that there is a good rationale for the discontinuity in assessment which presently exists between the world of study and the world of work. If such a rationale exists, I have not heard it propounded with much conviction. More often there are arguments that students, at almost any level, do not know enough to take responsibility for their learning, to be trusted to learn effectively, to have sufficient judgement to take any role in monitoring their own performance. Perhaps, by the end of the final year, they will be able to do so. But the final year arrives and there is always too much to cover. There is a point of discontinuity in academic study: in the sharp transition from taught undergraduate course to autonomous research student. A number of students who have been very successful in their undergraduate studies fail to make this transition, and Hudson's (1960) work on the undergraduate record of Fellows of the Royal Society suggests that it is not the high-flying undergraduates who are most successful in independent research.

Alternative Approaches

So far we have explored some of the limitations of present forms of assessment in the context of the provisions of good feedback to students on what is required of them, noted the tension between the unilateral control of

assessment by teachers and the goal of the development of self-determining graduates, and discussed how academics and other professionals are assessed by processes which often involve self-assessment, feedback from others and much reworking. It is often easier to mount a critique than to suggest alternatives, but in this case there is a small but very healthy indication of ways in which we might proceed to address one of the problems that has been identified: that many present assessment practices do not equip students for the skills they need in the world of practice. These ways may also provide partial solutions to some of the other problems of assessment.

(a) Active Monitoring of Assessment Practices

The first alternative is the most obvious one. If current assessment practices are failing through a lack of appreciation of research and of the way in which students respond to assessment tasks, then we should take steps to disseminate good practice and monitor the effects of assessment on students in the courses for which we are responsible. In particular, we should be focusing on the validity of the techniques used (there is a much greater emphasis at present on reliability), on the extent to which assessment practices encourage meaningful learning and the development of an appreciation of the central concepts in a given area, and on the perceptions students have of actual assessment. The latter is especially important, as it is not what teachers believe assessment to be testing which governs student behaviour, but their own perceptions.

One of the difficulties of this strategy is that some of the research findings are so damning that it is hard to believe that they might reflect one's own practice and thus construct a suitable form of analysis. It is quite demanding to replicate studies within the resource constraints of most departments and thus demonstrate findings to one's satisfaction. We all know what we are trying to elicit in the assignments *we* set, and it is difficult to accept that students might be operating on a completely different set of assumptions which undermine our goals.

It is more challenging for us to question whether the kind of questions which we have set for many years are really consistent with the kind of problem which a student might meet in that domain in the world of practice. We need to examine assessment tasks to see if they reflect adequately the decision-making processes which are required of practitioners in any given domain of knowledge. Even if they satisfy all the other demands they may still provide an inadequate foundation for future work in a given area.

(b) The Reflective Practitioner

Developments have been occurring at two levels. The first involves consideration of what competent practitioners do, what kinds of knowledge they possess and

deploy in their work and what relationship this has to the courses which prepare students to become practitioners. The second concerns the design of courses which acknowledge the nature -of professional competence and provide opportunities for students to engage in activities which deliberately provide for its development. Donald Schön has written widely in this area (1983, 1987) and has provided convincing arguments for the proposition that a vital element of competent practice, in whatever field of endeavour, is that of reflection-in-action; that is, the ability of practitioners to monitor what they do as they are doing it, and make assessments of what they need to do, drawing upon both their tacit knowledge and technical skills.

Schön argues that universities give privileged status to systematic, commonly scientific, knowledge. It is this which they assess in their own way and lead students to false conceptions about the nature of the practices in which they will engage. He provides a vivid image in his analysis of the problem of professional education:

> In the varied topography of professional practice, there is a high hard ground overlooking a swamp. On the high ground, manageable problems lend themselves to solution through the application of research-based theory and technique. In the swampy lowland, messy, confusing problems defy technical solution. The irony of this situation is that the problems of the high ground tend to be relatively unimportant to individuals or society at large, however great their technical interest may be, while in the swamp lie the problems of greatest human concern. The practitioner must choose. Shall he *[sic]* remain on the high ground where he can solve relatively unimportant problems according to prevailing standards of rigour, or shall he descend to the swamp of important problems and nonrigorous inquiry? (Schön, 1987, p. 3)

Schön goes on to describe ways in which the curricula of professional schools might be adapted to take account of his concerns and foster the development of the reflective practitioner.

While his prescription goes far beyond modifications of assessment practices, to the transformation of the curriculum, it is my belief that the assessment activities of existing programmes lock us into a limited conception of preparation for practice, and these must be addressed in any reform that we undertake. The domination of thinking about assessment in terms of the demands of accurate marking is such that there is a temptation to include assessment tasks which can be easily marked at the expense of those which might mirror reflective practice. An example is in the keeping of logbooks and journals. By their very nature, these documents are personal, idiosyncratic and exist as a forum for criticising and modifying one's own thinking. When they are actively used (not just for showing to others), they are often untidy, difficult for an outsider to follow readily and indicate examples of thinking which are later rejected. Students do not like to

submit work of this kind for assessment and therefore seek to change it to give an artificial sense of purpose and theme, thus destroying its value.

(c) Problem-based Learning and Assessment

A similar disquiet, perhaps not so robustly articulated, has also been the motive behind a parallel development worldwide which has focused on changes to curriculum and assessment. It has been applied most widely in medicine and the health professions but has spread now to most professional fields in one form or another. It is the idea of problem-based learning and the special role of self- and peer-assessment within it (Boud, 1985, 1988).

The essence of problem-based approaches to learning is that the organising concept is a problem in context, and that the learning of technical and discipline knowledge should be focused on problems rather than on the structure of the disciplines which have convention- ally thought to constitute the field of practice. For example, in medical practice the solution of most problems occurs through the application and interrelationship of knowledge from many different areas of knowledge (e.g. anatomy, physiology and medical technology) which have often been considered discretely. When the integration of knowledge is being assessed, and when an awareness on the part of the student about what he or she does and does not know is central, new forms of assessment are required. Progress should be on the basis of demonstrated competence rather than being 50% dependent on a test of technical knowledge. The question of whether the prospective practitioner can be relied upon by colleagues is also important.

Problem-based learning can be criticised for a potential lack of emphasis on theories and concepts which require an appreciation of disciplinary knowledge. This is a danger which can only be avoided by a careful analysis of what knowledge the solution of problems necessarily requires. There are always hard decisions to be made about what is to be included or excluded in a curriculum. Problem-based learning highlights these, as, without the familiarity of the framework of the discipline, it is necessary to think through each decision about content and process to ensure that less obvious fundamentals are not inadvertently excluded.

(d) Self and Collaborative Assessment

Self- and peer-assessment is not restricted to problem-based learning. Its use is now quite widespread in many subjects in professional and academic disciplines (Boud, 1986). Interestingly, it seems to be used more frequently than it is discussed. Since developing an interest in it about 15 years ago, I have been continually surprised by colleagues who have admitted to me that

they use some form of it only after I have declared my interest.

My view is that self-assessment is fundamental to all aspects of learning. Learning is an active endeavour and thus it is only the learner who can learn and implement decisions about his or her own learning; all other forms of assessment are therefore subordinate to it. This does not imply that learners assess themselves independently of others, only that if other forms of assessment are used they must take account of the primacy of learners' decisions about learning and not be structured so that the learner's capacity as a self-determining being is impugned. Assessments by peers, staff, expert practitioners and so on are essential in assisting learners to form sound judgements. Assumptions that learners are unable to make judgements undermine their capacity to do so.

There is increasing evidence that students are able to make judgements about their own learning, and that by encouraging them to do so assists them to take responsibility for their own learning and helps develop those skills which they need to continue to pursue their learning outside the institution (Boud, 1986; Boud & Falchikov, 1989). Even if students are not able to accurately self-assess (perhaps especially if they are not good at doing so), there is still good reason to focus attention on this attribute in courses. It is only when students perceive and take upon themselves the criteria by which they can judge good work in any domain that they can transcend the limitations of their immediate context and begin to make contributions for themselves.

The challenge for all of us is to find meaningful ways of incorporating aspects of self-assessment within courses so that learning within the course is enhanced and students gain confidence in judging their own performance. This is most likely to occur when self-assessment is an integral part of learning activities and not an appendage or afterthought. There is an increasing repertoire of strategies which can be used in both traditional subjects (summarised in Boud, 1986) and innovative ones (Boud, forthcoming).

That self-assessment is necessary for effective learning is not in question; what is somewhat controversial is its use for grading purposes (Boud, 1989). However, while there are substantial difficulties to be addressed, I believe that it is important for us to strive to overcome them. Summative assessment will always be a crucial control mechanism, and unless it too can be modified, the chances of the education of students being consistent with academic and professional practice is remote. Self-assessment in isolation is probably not a fruitful path to follow, but when moderated and used as an element of collaborative assessment its potential is great.

Conclusion

In this paper, I have pointed to the problem of the inconsistency between assessment practices and those principles which we espouse as important in

higher education. I have indicated that it is possible to create assessment practices which are more consistent with our own academic practices, which are more sympathetic with the exigencies of the world of work, and which help focus on more meaningful learning. We could take the view that there are more pressing problems, and that we should relax our requirements and ignore the contradictions, but my preference is to confront the contradictions and find ways of changing the practice of assessment. This task is a substantial one and the general direction is clear. There are, however, a considerable number of practical, technical, conceptual and political issues to address. What is necessary is to take the first step and have the will to look without preconception at the need for change. Financial pressures in higher education have restricted our horizons: there is a substantial challenge for us. Whether it is seized now depends on whether we have the courage to critically examine our own practices.

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