

12 How should I assess creativity?

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Introduction

My background, as far as assessing creativity is concerned, is distinctly heterogeneous. In my academic career, I have had to engage with this challenge in many different disciplinary settings. I have assessed creativity in my original discipline of engineering (Cowan, 1981a, 2004a), in my second academic career in the social sciences, but also in architecture, in design in a College of Art, in PGCertHEs, in mathematics and – admittedly briefly in each case – in a course on dance, in modules on theology, and in the design of a module on osteopathic education. In other words, I claim that my thinking in what follows is reasonably multi-disciplinary.

Originally, I had in mind to simply reflect around the challenge as I see it and then to advance my own somewhat individualistic blueprint for an approach which I sincerely believe is at least an advance on the status quo. However, while the process of writing was proceeding, so too was an unfolding public conversation about the assessment of creativity in the Imaginative Curriculum network. Three of the papers that emerged from that debate were so in tune with my thinking and the writing that I had already completed, that I felt somewhat nonplussed and uncertain about how to acknowledge and refer to them. I certainly wanted to make use of them, because they reinforced my suggested approach so strongly and endorsed or clarified the thoughts I had already assembled. I felt it would be wrong to plagiarise, even with adequate acknowledgement, since the writings spoke for their views more effectively than any paraphrasing of mine could do. Eventually, I decided to extract key quotations from these papers and incorporate them in an appendix (12.1), so that readers who share with me in the dilemmas that are presented by the challenge to assess creativity, should encounter some positive, definite, authoritative and independent statements on the subject, before venturing with me into my somewhat innovative and certainly individual proposal. In deciding to present their shrewd thinking in this way, I was minded of the tale of the encounter between those bitter antagonists, Whistler and Wilde. During this discussion, Wilde was moved to admit grudgingly, ‘I wish I had said that’ – to which Whistler replied scathingly, ‘You will, Oscar, you will.’

Finally, I should emphasise that – despite what I have just explained – this

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chapter is very much a personal statement. So its citations are almost entirely corroboratory references to my own work. It is thus virtually bereft of the profusion of cross-references that are increasingly expected of us, if our academic writing is to be seen as respectable and to be respected.

The challenge presented if, or when, we seek to assess creativity

Assessing creativity by the process

Of all the cognitive abilities, synthesis or creativity is arguably the most difficult to assess. We can determine and hence assess what someone knows, simply by asking a question which calls for the *knowledge* concerned to be given in the answer. We can judge *understanding*, by asking a question that calls for a response which explains or rewords that which the learner knows and claims to understand. We can assess the ability to apply understanding, by getting the learner to apply the particular understanding in question, and to leave a trail, in one form or another, which shows how they have been tackling the applying, and how that led them to the end product of that *application*.

Moving (for convenience) further up a familiar taxonomy of cognitive abilities, we come to *analysis*, which is rather more difficult to assess – but only slightly so. For analysis, almost by definition, tends to follow a fairly definite process, even if it is a distinctly personal algorithm. This approach, even if not explicit in the record of the analysing, is capable of being described by the learner as ‘their method’, for they should know what they were doing and how they do it. That claim can readily be checked against the overt evidence that they generated as they progressed through their analysis, since the evidence in the trail that they have left can then or later be amplified, if necessary.

Not so with *creativity*. For many of us, the heart of the creative process is often the sudden insight or idea, the ‘blue flash’ out of which the germ of an idea emerges. That inspiration may come about as a reaction to an earlier and now obviously unsuitable idea, or from thoughtful mulling through the elements of the problem that confronts us, or by adaptation of a remembered solution, or by responding to the prompt of a colleague or to an innocent question from them, or from translation of a familiar solution into an entirely new context, or even through systematic reasoning. And at one time or another, a creative person may find their route to creativity in any of these ways, or perhaps in another manner that I have not mentioned.

The multiplicity and often the suddenness of the possible approaches to being creative therefore complicate the business of assessing the process – because the creative process, for any learner, is unpredictable and difficult to capture. It is even often quite difficult for the creative person to capture and describe. I have listened to many recorded protocols in which students were talking out their thoughts aloud as they solved problems which I had set for them, often calling upon them to be creative, in some way (Cowan, 1977, 1980a; Brohn and Cowan, 1977). Time and time again, these recordings produced two forms of sound that

conveyed very little detailed information. There would be the expletive when something went wrong, or when an error was spotted. And there would be the strangled cry of success when a penny dropped, or when a blue flash illuminated a feasible solution. Even drawing upon the recorded protocol, the nature of the creative thinking then occurring was insufficiently defined for me to formulate a full account, let alone assessment, of the speaker's creativity.

Assessing creativity is a problem with a number of dimensions. The process is highly personal, it varies from challenge to challenge, and often has at its heart a flash of inspiration which is extremely difficult for the creative problem-solver to capture for themselves. Another and more fundamental problem about assessing the creative process for academic purposes is that creativity (understandably?) tends to be judged, within society, in terms of products that are seen to be creative and are rated as commendable for that reason. Yet often it is in the experiences of failure and frustration that the creative ability is honed and developed.

Assessing creativity by the product

What happens, then, if we assess on the basis of the product of the creative process? Surely a creative product is evidence of a creative mind in action? Assessment by product is the common approach across disciplines and levels of ability. We usually assess someone's ability to apply understanding by the product of their efforts. We can make a fair stab at assessing their ability to analyse from the evidence of the final analysis that they produce and present. In contrast, the creative process often takes place without much recorded evidence of what was going on in the creator's head, and with what *is* available being ambiguous and perhaps misleading. So it would seem that assessing creativity by product is the solution we should adopt.

Nevertheless, this is not as simple as it may seem. For that which appears a brilliantly original and creative product may simply (and quite legitimately) be something which was recycled (not plagiarised) from a piece of prior creativity generated either by this person, or by someone else. It may have arisen from imitation, adaptation or recall – all modestly creative, admittedly, but not quite meriting the assessment rating for top- standard creativity (whatever that is) that the product appeared to merit on first appearance. To make a considered and comprehensive judgement of the extent to which a product is creative, the judge of that potential creativity surely needs some awareness of how the innovatory product was conceived. Of course, the person best placed to make such an informed judgement is the creative person, themselves.

However, in academia at present and in the past, teachers have mainly relied entirely upon their own judgement of the created product to provide the basis for their assessment of the producer's creativity. Assessors strive to eliminate imitation, adaptation or recall, by engaging the students who are to be assessed on a task which should be new to them, and one in relation to which they have had little or no prior and relevant experience. It should be a problem for which they will not be recalling solutions, produced for a similar problem by other creative

1 people, whose efforts can be imitated or adapted. It will be a situation rather
2 unlike those that they will encounter in the professional life wherein they will, it
3 is to be hoped, continue to demonstrate a creative approach, and interact forma-
4 tively with peers and others while so doing. The yearning remains to find ways
5 to identify the process of creativity in sufficient detail to make an assessment of
6 it in relation to the product, and vice versa.

8 ***Relation of student-centred learning to the self-assessment of*** 9 ***creativity***

10 At the time of writing, and certainly in the UK, several forces combine power-
11 fully to urge higher education to move markedly and swiftly towards student-
12 centred activity for learning. This goal is, for a start, pedagogically desirable,
13 especially in respect of the nurturing of higher-level abilities. It is economically
14 essential, as numbers and student/staff ratios escalate while resourcing suffers
15 attrition for a similar reason. It is socially desirable, if higher education is to be
16 accessible to, and effective for, learners of greatly varied prior experience, learn-
17 ing styles and abilities.

18 It is perhaps less obvious that there is another factor which is strengthening
19 the emphasis on student-centred learning, and self-assessment. This is the stress
20 that the quality-assurance 'industry' is placing on the design, provision and
21 delivery of fully aligned curricula. In programme specifications and delivery,
22 teachers are expected to specify their intended learning outcomes – which in
23 relation to our current topic would entail encapsulating in generic terms what
24 this highly individual and variable creativity will look like, once it is achieved.
25 Teachers are also expected to design and to justify pedagogically the learning
26 activities that they deliver, and in which, in this case, the creative ability should
27 be purposefully nurtured and developed. And they should specify methods and
28 standards of assessment, which will be used to judge the achievement of the
29 learning outcomes – in this case, creative outcomes. In all of this process, the
30 outcomes, activities and assessment should be as well-aligned as possible –
31 which means, in other words, that they should be compatible. This is a demand
32 to which all disciplines are nowadays expected to make an adequate response.

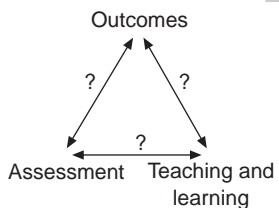
33 Even in the relatively recent past, reasonable alignment has been relatively
34 rare; in most disciplines, mismatches in alignment represent clear weaknesses in
35 curriculum design. Assessment has often rewarded regurgitation and the follow-
36 ing of instructions, rather than the deep and creative thinking that featured
37 rhetorically in the corresponding learning outcomes. Learning activities have
38 often simply allowed students to *practise* abilities, without necessarily *develop-*
39 *ing* them – with the result that the able have demonstrated and confirmed their
40 ability, and the less-able have demonstrated their inability. And so there have
41 been, and in many cases still are, stark discrepancies in the links between these
42 three aspects of our curricula, between which we should expect alignment
43 (Figure 12.1a)

44 However, the concentration, through various quality assurance initiatives, on
45 identifying and minimising aspects of lack of alignment is having the interesting
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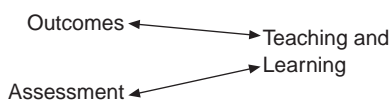
result (Cowan, 2004b) that there is movement from aligned elements, as they should be in Figure 12.1a, to what I will call integrated elements. The first such move is already apparent in some thoughtful curriculum designs, where the detailed plan and documentation for well-aligned assessment features explicit and well-designed tasks and clearly explained criteria and standards. In effect this then renders the statement of learning outcomes virtually redundant, since they are spelt out accurately and in full in the scheme for assessment. This intermediate transformation is illustrated diagrammatically as two partially integrated elements (Figure 12.1b and 12.1c).

If the designed activity for learning is open-ended and not overly directive, it behaves the learner who has to be active within such a situation to monitor, if not ensure, alignment between the two remaining elements - their learning as it progresses, and the intended and assessed outcomes. Consequently, the progression towards full integration will naturally move further. The self-directed learner, with an eye on institutional assessment, will see an advantage in early formative *self*-assessment, whether or not that is formalised and encouraged. This self-assessing learner, as we have seen in many schemes over the past 20 years or so (e.g. Boud, 1995), will *direct* their learning towards the intended learning outcomes, according to the declared values and standards. In addition, the self-assessing learner will further *manage* their learning on a day-to-day basis, to achieve as best possible the desired outcomes and standards (Boyd and Cowan, 1986). Hence the two remaining block elements are, or can be, in effect, fully integrated as in Figure 12.1d.

What implications could this then have for the assessment of creativity, in programmes or modules where the nurturing and exercise of creativity are



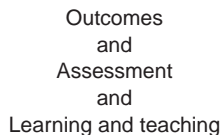
A) Common mismatched practise.



B) Alignment nearing integration.



C) Two elements integrated.



D) Full integration into student-centred learning.

Figure 12.1 From alignment to integration.

1 valued, and where the precise definition of that creativity might heretically be
2 left un-specified at the outset? It would then feature, not as *intended* learning
3 outcomes, but rather (at the conclusion of the learning experience), as *achieved*
4 learning outcomes.

5 These thoughts have led me to a number of rhetorical questions with whose
6 answers the writings of experts (Appendix 12.1) may assist us, as we review my
7 plan for assessing creativity and creative work.

9 **Plan for assessing students' creativity**

11 ***Outline***

12 The plan that I set out here is an amalgam of significant elements of practice that
13 have already featured effectively for me, and for my undergraduate students, in
14 validated programmes. They have simply not hitherto been brought together, in
15 one scheme. Before outlining it in detail, I offer a description of the end product
16 that I have in mind, for those who like to know, as I do, where they are going
17 before they start. Each student will assemble what may at first sight appear
18 somewhat like a portfolio, but is rather a self-assessment. A portfolio is a collec-
19 tion of a person's work, showing its strengths and variety, and enabling the
20 reader or viewer to make their own judgement of overall merit. In contrast, a
21 self-assessment, contains and presents the following elements:

- 22 • A definition of what the person being assessed (whom I shall call 'the
23 learner') means by 'creativity'.
- 24 • A clear statement of the achievement and/or development in creative ability to
25 which the learner aspired in respect to undertaking the period of study or
26 development wherein creativity is being assessed. This statement is to be
27 amplified by an indication of the standards or levels against which the learner
28 has decided to judge that creativity, as it was displayed and developed during
29 the period of studies in question.
- 30 • An indication of the sources from which the learner has drawn information
31 from which to assemble their judgement of their performance and develop-
32 ment.
- 33 • The information which then emerged and informed the learner's judgement.
- 34 • The making of that judgement.
- 35 • The judgement in qualitative terms, perhaps under various headings.

36 In my plan, the learner will present this assembled collection of items for audit
37 (meaning scrutiny of the rigour of the self-assessment). The assessors will not make
38 their own judgements of the learner's creativity from the documents before them.
39 Rather, they will decide if they are sufficiently persuaded by the learner's making
40 of their judgement to endorse the learner's self-assessment of their own creative
41 processes, thinking and outcomes, made against the learner's chosen and stated cri-
42 teria, and following the method of judging which the learner has outlined. They will
43 then simply confirm that the learner's self-assessment is (or is not) objectively
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established by the information the learner has assembled for that purpose, and the way it has been used.

The primary purpose of this strategy is to enable students to explore, experience and develop their own understanding of creativity and to construct new meanings in the context of their programme and disciplinary field of study. In so doing, it embodies the suggestions made by Oliver *et al.* in Chapter 5 of this book where they conclude that ‘claims to an emergent creative ability can only be warranted if they can be articulated’. The role of the teacher is to create the conditions that facilitate this type of learning and to help students develop their capacity to recognise, represent and evaluate their own creativity. How, then, could we who are in the business of assessing creativity go about such a process of audited self-assessment? I offer below my plan, amplified as a sequence of steps, and accompanied by some comments in italics on the rationale for them. I leave it to you to refer to the experts’ statements (Appendix 12.1) which I believe often explicitly support what I propose and to the explanations of practice on which my plan is based (Appendix 12.2).

My plan

I now invite you to identify any parts of the plan that follows, which might have something to offer your practice – and any on features that you can improve.

Step 1: I would begin by reassuring the learners (preferring that term, now, rather than ‘students’) about the genuine flexibility of the programme. I would if possible bring in some of last year’s students, to confirm what I am telling the new cohort, which is that what they are asked to decide within the process which they will follow will be open at any stage to revision, refinement or total rejection and change.

Rationale: Development is an iterative process, in which the experiences of one iteration should inform the progression into the next one.

Comment: This step was a key feature in the three main programme developments I have instanced, and for the CPD pilot (Cowan and Westwood, in press), for all of which I have had responsibility, and which featured self-assessment.

Step 2: I would begin the process by helping the learners to define what they mean by creativity and the features of creative work in their discipline, at this point in time.

Rationale: If you don’t know where you’re going, any bus will do. Conversely, if the learner is clear about their intended goal, they will purposefully direct and manage their learning and their development accordingly.

With this end in view, I would plan and facilitate a 90-minute workshop in which learners (working in, and splitting tasks within, groups) will be prepared to go out individually, each to question one of a variety of resource people. The interviewees (selected and approached by the interviewers) are to include established professionals in the learner’s discipline and outwith it, postgraduate students and recent graduates in employment, employers and representatives of relevant professional bodies. I would structure and facilitate a business-like task

1 in which views and advice, which relate to our purpose, are in-gathered,
2 digested, and re-assembled within the small groups, with interchange across the
3 larger class group. These group discussions, and even the group summaries on a
4 flipchart, would be simply a means to an end – for the individual. For, finally,
5 each learner will draft their own definitions and explanations of what this cre-
6 ative ability should entail. This statement is to be drafted on a personal and indi-
7 vidual basis, of which each writer has ownership and understanding.

8 *Comment:* I have run this workshop to greatest effect with first-year under-
9 graduates, who were to go on to produce open-ended assignment work, and
10 would be expected to self-assess it before submission.

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12 **Step 3:** Similarly to the approach of the activity in Step 2, I would help the
13 learners to produce their first drafts of personal standards and targets.

14 *Rationale:* We cannot make judgements of performance (and development)
15 without descriptors against which to judge performances and development.

16 I would now offer a second workshop, following on from the first one, and on
17 similar lines. In this activity, I would facilitate the learners to draw upon and
18 mull over the advice and examples given to them and their peers in their various
19 enquiries. Such a discursive process might be informed by (but need not
20 conform to) the demands of the qualification (Framework for Higher Education
21 Qualifications Framework or Scottish Credit and Qualification Framework),
22 enhanced subject benchmarking statements that engage with the idea of creativ-
23 ity or accounts of the meaning of creativity in different disciplines (Jackson and
24 Shaw, this volume, Chapter 8).

25 Accordingly, and again after discussions in groups, students should individu-
26 ally draft performance scales in respect of their discipline area. These should
27 spell out standards of performance and development, in terms and with inherent
28 standards which the learners will have declared to peers and discussed with
29 them, as with their teachers and other professionals in their discipline. This con-
30 sultation definitely does not preclude the selection of personal targets and stand-
31 ards that may differ from the general view in the class. Nor should there be any
32 element of ‘second guessing’ of the staff position. However, each learner should
33 have identified any such differences, and rationalised them, for inclusion in their
34 justification of the chosen targets and standards that will feature in their final
35 self-evaluation.

36 *Comment:* This workshop, too, has been a feature of some of my work with
37 students of social sciences, and combined studies (or general studies) students.

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39 **Step 4:** I would set the learners off to engage reflectively in the creative activity,
40 whatever it is, which is central in their study programme.

41 During this period I would expect the learners to maintain a reflective journal.
42 This should focus on the creative process, but not as a diary. Each entry should
43 begin by posing a question about the process in hand – a question for which the
44 learner at the time of writing has not articulated the answer, and for which the
45 learner feels that even a part answer would be of value to them, in progressing
46 their development. I’m assuming that this will be a strange task for them, so I

would not ask them to tackle it without first having been shown examples taken from a different discipline, wherein students would have been learning and developing reflectively. They would have the opportunity to discuss and question these reflective accounts. Thereafter, in their first journal entry, I will ask my learners to think through their answers to the question – ‘How should I tackle the next programme task which calls upon me to be creative?’ This reflection should happen early on, without the learners knowing at that point the nature of the specific demand they will confront in the first given task. Their self-advice must therefore be in general terms.

Journals will be commented upon, confidentially, by a teacher or tutor. The commenter will express no overt judgements, nor will they offer tutorial suggestions on its content. They will merely ask facilitative questions where they have noted a non sequitur, or failure to explore options, or the need to consider implications, or the absence of an indication of how decisions will be reached. The comments will mainly take the form of questions that the learner might usefully consider – with perhaps a brief mention of why the questions are worth considering.

Rationale: Those who take time to think in generic terms about how they do things are likely to become more effective in that activity; and those who are effective in doing demanding tasks tend to have the ability to stand back, if and when they so wish, and identify what they do, and how, and why (Cowan, 1986, 1998).

Comment: Such facilitative commenting has been a central element in my approach to developing capabilities in a variety of discipline areas for over 20 years.

The learners will now encounter a specific task for the first time, and will begin to tackle it. The form of tuition provided by me would be in accordance with traditional approaches in the discipline, those that would be described as ‘good teaching practice’ – but will naturally vary from discipline to discipline.

Whether or not it would normally be a feature of established practise, learners will take part regularly in group ‘crits’, as practised in architecture and the creative arts. In these sessions, learners will critically appraise a piece of their work in progress, after which peers and tutors will offer comment, with an emphasis on reasoned and constructive judgements of that work. In presenting these judgements, speakers will be expected to describe and explain the sound standards against which they make judgements. In addition, a few sessions (which will be arranged in the same format) will focus on the *approaches* which learners are following, in attempting to be creative and to enhance their creativity; and, again, peers and tutors will attempt to offer reasoned and constructive suggestions, this time on method rather than product.

Learners will encounter the concept that judgements, whether formative or summative, can be made in qualitative terms and against what we will call a ‘sound standard’ descriptor. It will specify a standard midway between a bare Pass and Distinction. This descriptor will be framed without using value words. For example, rather than specifying a standard in terms of ‘*thorough* consideration of options’, a ‘sound standard’ descriptor might specify that standard as

1 featuring 'at least three distinct and competitive options having been conceived
2 and explored for feasibility'. The making of what will be qualitative judgements
3 will be facilitated by discussions in class of supplied examples of 'finished
4 work', which are in some ways stronger than the 'sound standard' against which
5 they are to be judged, and in some ways weaker.

6 *Comment:* I have used this approach with students of social sciences with
7 great effect in raising targets and standards, and hastening assimilation of
8 intended learning outcomes.

9 Throughout the duration of the creative work that constitutes the main part of the
10 programme for the learners, they will continue to keep a weekly journal, concen-
11 trating after the first entry upon such questions as, 'What have I learnt recently
12 about being more creative than before?', or 'What do I need to do to develop in my
13 creativity – and how?' – or some such general question of their choice, concentrat-
14 ing on their immediate priorities for the creative process and activity.

15 **Step 5: Making changes.**

16 *Rationale:* As we engage more and more and deeply with processes and standards,
17 so does our thinking develop and so do our aspirations and intentions refine.
18 The programme and its practices should recognise that, encourage it and build
19 upon it.

20 During the programme, learners (as already explained) will be free to make
21 any changes they wish in definitions, statements of standards or personal aspira-
22 tions - provided these are reasoned and recorded in their journals. From time to
23 time I will explicitly encourage them to do so.

24 *Comment:* This, again, was a strong feature of all three major developments I
25 have instanced.

26 **Step 6: Assessment.**

27 Learners will assemble the following in their self-evaluation:

- 28 • Their definition of creativity, and their specification of the appropriate
- 29 standards against which they think their creativity, and development of it,
- 30 should be judged.
- 31 • The sources of information – data, work produced, feedback, journal entries
- 32 or whatever – upon which they have drawn to inform their judgement.
- 33 • A summary of the relevant items they have in-gathered.
- 34 • A description of their understanding of their own creativity and the way it
- 35 was manifested during the module, and of the enhancement of that ability
- 36 during the module. This should draw upon the items in their collection, and
- 37 be framed in the same terms as their definition and statements of standards –
- 38 against which it can then be set, and compared.
- 39 • The explanation of how they reached the judgements in their self-assessment.

40 Most of the items in the collection will not be self-sufficient; they will need to
41 be corroborated by or with other items. Let's not call these items 'evidence', for
42 that term has connotations for me of courts of law, where 'evidence' must be
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indubitable. Similarly, I'm avoiding 'data' as much as possible, as it's not really the term I would naturally use to describe the items in a personal collection.

Many of the items will only be strong enough to influence judgement validly when they corroborate and amplify each other. Items will come from reasoned judgements and advice from peers or tutors, from reflective journals and the comments thereon, from observations of changes in practice associated with enhancement of creativity, and from the evidence of work in progress or completed, as much as of end results. Learners will be encouraged to use these to establish the best that they can be. Consequently the risks that they took, creatively, but which led to failures, need only be featured if the learner feels that they reflect worthwhile or effective handling of the creative process.

The self-assessments will be audited (scrutinised) in the first instance by peers who will be charged to turn back any assessment that does not follow the specified procedure and embody its features. In that case, learners will then have the opportunity to re-assemble their self-assessment, if they so wish.

Self-assessments will finally be audited by assessors who do not know the learner's current work, and must authenticate the process of assessment and the learner's consequent judgement from the self-assessment collection itself. The auditing assessor will simply:

- check that the learner's criteria and descriptors of standards are comprehensible.
- and check that the data and items used in informing the learner's judgement do indeed objectively justify the assessment the learner has reached, according to the method of making judgements which is described.

Learners will then proceed to the next stage in their studies, or to seek employment, bearing an audited assessment of how well they can perform in terms of values and standards that they have chosen. These values, demanding or otherwise, will be transparent in the self-assessment, and so are then open to judgement by employers, others – and self. If the university system demands marks or grades for this subject, then class and teacher together can and will negotiate a defensible way to convert qualitative judgements into marks or grades.

Some closing thoughts

Within higher education, we can and should only make a contribution to the business of continuing to develop a person's creative abilities. That development will continue throughout their professional life, by which time the learner will have come to understand the meaning of being self-directed in the employment environment, and will need to self-assess – first for formative reasons and then, on occasions, summatively. Surely we should anticipate that demand, by providing an education in which the necessary ability for self-assessment is itself introduced and nurtured? Will that not be furnished most effectively within a special type of teacher/ student relationship in which both learn together to co-create understanding, values and awareness?

1 The person nearest to the creativity is the creator. It surely then makes sense
2 to move the assessing activity and responsibility as near as possible to the
3 person who is best informed, provided the outcome is then declared? In addition,
4 the emphasis in my suggested approach is more on formative than summative
5 assessment, and on its impact on learning and development. Maybe that is no
6 bad thing?

7 Perhaps also, we would profit from giving more attention to the tasks within
8 which we nurture and assess creativity?

9 Many years ago, I used to introduce quartets of first-year students of civil
10 engineering to the concept and challenge of designing. I gave them some balsa
11 wood or spaghetti and sticky tape, and challenged them to build towers or
12 bridges or whatever, to a given problem specification. They were to be judged
13 by the ratio of the load carried before collapse to the weight of the model
14 structure. No marks were to be awarded, but the competition was intense.
15 When I first offered this activity, I noted sadly that the designs were hastily
16 conceived, and indeed that many were pathetic, often unable to support their
17 own weight. So eventually I changed the task. I challenged them to design and
18 fabricate *two* structures that were to be fundamentally different, though to the
19 same problem specification. The structures each had to have one major feature
20 which was not the same as in the other model. And a group was judged on the
21 *poorer* of their two models. This completely changed the group behaviour, in
22 four ways:

- 23 • They spent much longer thinking through their analyses, before selecting
24 plans and beginning fabrication.
- 25 • There were hardly any pathetic models, which could not support their own
26 weight.
- 27 • The winning ‘poorer’ models were distinctly better than the winning models of
28 a few years earlier, when the same problem had been set, but judged in the old
29 way.
- 30 • There seemed to be more conversation within the groups, both during the
31 event and after the testing, about ‘how to do it’.

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34 With these observations in mind, I repeat and close these comments on the
35 suggestion that perhaps we should give more attention to the tasks within
36 which we nurture and assess creativity. That will entail much greater and more
37 sophisticated creativity on our parts than feature in my primitive example from
38 the early weeks of a first-year programme.

39 40 ***Could this plan succeed?***

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42 Of course it could succeed; I know it can work, because I have almost followed
43 it already. It certainly contains no elements which I have not featured effectively
44 in undergraduate programmes, with success and without problems. You will
45 make your own judgement about the extent to that it embodies the advice and
46 views of our three experts. For my own part, I find it difficult to see any major

point in their advice that is not embodied in my plan more effectively than in the status quo of assessing creativity. I don't claim it's a perfect plan – but simply that it represents a real step forward.

It can be supported by other strong arguments:

- Most of the main features in this plan featured in the example described in my second group of references in Appendix 12.2. This was approved 20 years ago as 25 per cent of the programme in the penultimate year of a degree programme, which was accredited by a professional body not known for its liberal approach.
- Around the same time, if not earlier, several Scandinavian universities with project-orientation programmes dispensed with final-year assessment altogether. Once the first cohort had moved into practice and proved their ability, subsequent graduates did not experience much difficulty being employed on the basis of what they were, what they had done, and how well they interviewed.

Why is this scheme not in use in at least some UK programmes, then? Bluntly, the first reason is that I am a retired part-time lecturer, and no longer a senior member of any course team. Another reason is that to put this plan into service would call for a course team to be willing to examine practice elsewhere, and consciously to take risks in delivering something in a style for which they have not hitherto been responsible. It also calls for a validation panel to take risks in the same way. To achieve all of that, frankly, would call for an influential leader of the innovation who would not only have conviction and resilience – but also tactical *nous*. For, in my experience of launching innovations in higher education, the secret of success is to have piloted what you plan, and to know that it can work; to have carried your students with you into seeking enhancement in their learning from what you plan; and in confronting the sceptics tactically, rather than on the basis of reasoned arguments, which I have found will seldom impress staunch sceptics.

Appendix 12.1

Conversations in an evolving debate

This appendix contains a synthesis of mail base discussions and other deliberations of the Imaginative-Curriculum Network that were available in June 2005 on the Higher Education Academy website (www.heacademy.ac.uk/2841.htm). They include three main articles:

- Tom Balchin – ‘Assessing students’ creativity: lessons from research’
- Lewis Elton – ‘Designing assessment for creativity: an imaginative curriculum guide’.
- Norman Jackson – ‘Assessing students’ creativity: synthesis of higher education teachers’ views’.

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1 I quote here the information and advice offered by these three authorities in
2 the field, under the rhetorical questions that emerged for me in developing this
3 chapter. In this form, I believe they convey a powerful argument, without
4 commentary from me, in support of the plan for assessing students' creativity
5 which I elaborate in the second half of this chapter.
6

Should creativity be assessed?

- Evaluation is critical to the very idea of creativity (Jackson).
- The views of higher-education teachers on whether creativity can be assessed fall into four camps. Some teachers believe that students' creativity is assessed through explicit assessment criteria. Others believe that, at best, evaluation and recognition is implicit. The third group believe that it is not possible or desirable to assess creativity. Teachers in the fourth group value creativity, but don't know how to assess it (Jackson).

Are we sufficiently clear about what we want to be assessed?

- It is necessary to operationalise the abstract word 'creativity' if it is to be linked to assessment. Hence the use of the phrase 'creative work'. For work to be considered creative, it has to be: within its context and, in the case of students, at a level appropriate for them: both new and significant. An important aspect of that context is the creator (Elton).
- While not all criticality is allied to creativity, all creativity must be allied to criticality. Hence, in order to recognise and assess creative work, it is necessary to assess both the creativity and the criticality involved, within the appropriate context (Elton).
- It should be possible to separate subjective judgements of creativity from judgements of technical goodness and from judgements of aesthetic appeal. It is important to demonstrate that it is at least possible to separate these dimensions (Balchin).

Should we assess both process and product?

- It is the concept stage where the unique ideas are brought forth, and the product stage is the manifestation of these creative ideas (Balchin).
- Current research has shown that any identification of a thought process as creative must finally depend upon the fruit of that process – a product or response (Balchin).
- There is almost universal agreement that understanding a students' creativity depends to some extent on their ability to understand and explain it (Jackson).
- The complex and multidimensional nature of creativity cannot be captured effectively and comprehensively by any single instrument or analytical procedure (Balchin).
- ... (that the same grade can be obtained on the basis of quite different strengths and weaknesses and that it therefore hides details of a student's

performance.) . . . This, in turn, has led to the idea of a profile in which each part is separately classified if appropriate, and not if not, the final outcome then being reported in the form of a profile (Elton).

Why should the learning outcomes of an experience that develops creativity be specified in advance?

- Clearly, it is, in general, neither possible nor desirable to assess a piece of creative work against predetermined criteria – the criteria have to be interpreted in the light of the work (Elton).
- Outcomes-based learning (OBL) is predicated on the teachers' notions of what will be valued at the end of the process. OBL also tends to focus on results rather than the process of acquiring the results – where creativity in action lies (Jackson).
- Outcomes-based assessment systems that assume that all learning can be predicted are antithetic to learning that emerges in unpredictable ways (Jackson).
- There is a dichotomy between the individuality and originality we say we are trying to promote and the way we place boundaries on creativity when we come to assess through the criteria we use (Jackson).

Can the teachers, or other external judges, be relied on to assess creativity?

- Perhaps seeing possibilities in students' manifestations of creativity is an example of how teachers themselves must be creative when they are assessing students' creativity (Jackson).
- Criterion referencing on the part of examiners implies what Eisner (1993) has called *connoisseurship*; the educated ability of experts in a particular field to assess work in it (Elton).

If creative ability is often honed and developed in the experiences of failure, how can we recognise this in our assessment practices?

- Taking risks by moving into the unknown is part and parcel of trying to be creative. The risk of failure (dropping the ball) by not accomplishing goals that have been set is higher. Teachers have to be willing to let students *fail* (not achieve all they wanted to achieve) and value failure if this is the result of creative endeavour (Jackson).

Will learning and development not both be enhanced by involvement of the learner in self-assessment, which will also further the process of assessment itself?

- Perhaps the primary role of the teacher is to help students recognise and understand their own creativity and help them express it and make claims against the evidence they feel is appropriate (Jackson).

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- 1 • Perhaps real empowerment of students only comes when they can catch
- 2 their own creativity (Jackson).
- 3 • There exists another useful way to measure creativity; to simply ‘ask the
- 4 subject’. The subject himself [sic] should have a good idea of his creative
- 5 ability in a wide variety of areas, and especially the moment of inspiration
- 6 that caused him/her to take creative action (Balchin).
- 7 • If creativity is socially constructed then it is obligatory that the creative
- 8 actors/artists (the students) are themselves involved in decisions about their
- 9 own creativity (Jackson).

Should we assess all practice, or best practice, in this context?

- 13 • In principle, a student’s portfolio contains all that the student wishes to be
- 14 assessed on and it starts with the idea of assessing what the student claims
- 15 to be good at (Elton).

Upon whose criteria should the assessment of creativity be based?

- 18 • Perhaps the most important feature (of a consensual definition of creativity)
- 19 is its reliance on subjective criteria but, ultimately, the choice of these
- 20 characteristics seems to be personal to the evaluator (Balchin).
- 21 • Creativity assessment might be regarded as an attempt to recognise or
- 22 identify creative characteristics or abilities among people, or to understand
- 23 their creative strengths and potentials (Balchin).
- 24 • This raises the issue of students’ involvement in negotiating the criteria
- 25 against which they will make claims and by which they will be judged
- 26 (Jackson).

And, as a worrying prompt for the closing remarks at the end of this chapter

- 30 • A serious obstacle can arise in trying to fit unorthodox forms of assessment
- 31 into regulations not designed for them (Elton).

Appendix 12.2***Sources of descriptions and evaluations of the practices that underlie the plan for assessing students’ creativity***

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| 37 | Cowan (1980b) | This paper describes a first year course ‘without a syllabus’ which received an award from the Royal Society of Arts, under the Education for Capability Scheme. In it, first-year students of civil engineering determined their syllabus as a totally open choice, but only undertook formative self-assessment. |
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172 *John Cowan*

- Boyd *et al.* (1984);
Cowan (1984b, 1988) In these writings, three of my students and I separately described an innovatory course in which the students decided what to study, and to what standards – and self-assessed themselves, after peer interaction, in a process that yielded marks which contributed to the award of their degree. This was in a discipline (civil engineering) where it was important to retain the approval of the Joint Board of Moderators. I assisted one of my students (Boyd and Cowan, 1986) to identify the way this setting influenced the students' learning. 1
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- Cowan *et al.* (1999);
Weedon and Cowan
(2002, 2003) These papers relate to an undergraduate social science module in the UHI Millennium Institute programme, entitled 'Enquiry Skills'. This was developed iteratively, and in its final version (from 2002 until 2004) entailed allocating 50 per cent of the module marks to the evidenced claims for the development of enquiry skills defined by each learner, against criteria specified by each learner. The marks were to have been awarded according to the learner's audited judgement. In my own case, this was so. I am less sure in respect of all my colleagues. Old habits die hard. 12
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- Cowan (2002) In this paper I detail in general terms a method of assessment formulated in qualitative terms against descriptions of 'Sound Standard', which is roughly midway between a bare Pass (40 per cent) and Distinction (usually 70 per cent). Since publishing and publicising this way of assessing without grades, I have had more positive feedback from academics who were previously unknown to me than for any other idea I have encouraged others to take up. It was used in the Enquiry Skills module I have mentioned above. 23
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- Cowan and
Westwood (2006) An account of the outcomes claimed by experienced university teachers who had voluntarily been engaging in reflective journalling with their own continuing professional development in mind. They claimed and assessed that development qualitatively at the conclusion of this small pilot. 33
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