

the

New Academic

The Magazine of Teaching and Learning in Higher Education Summer 1997, Vol.6 No.2

Graduate Standards

HEQC Draft Report Summarised

Also:

Peer Assessment

Peer Observation of Teaching

More on the Art of Inspiring Students

Getting a Doctorate in Education

SEDA

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FSEDA	Fellow of SEDA
HE	Higher Education
HEFC	Higher Education Funding Council
HEQC	Higher Education Quality Council
HND	Higher National Diploma
NVQ	National Vocational Qualification
SRHE	Society for Research in Higher Education
THES	Times Higher Education Supplement

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the New Academic

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Photographers: Bob Pomfret (cover, p.13),
University of Plymouth (p.17)

Graduate Standards

The Higher Education Quality Council (HEQC) has been investigating the notion of Graduate Standards, and in November 1996, published a draft report of its findings for sector wide consultation. Here, *Ivan Moore* attempts to summarise the findings of the draft report, which identifies clear implications for academic practice, both within institutions and throughout HE.

The final report is now being completed in the light of the consultation exercise and is due for distribution in June. *The New Academic* plans to carry a fuller analysis of that report in a future issue.

PREVIOUS FINDINGS

The findings of the first stage of the Graduate Standards Programme (GSP) (*Interim Report, HEQC, 1995*) can be summarised thus:

- ◆ The notion of comparability of standards no longer commands general support.
- ◆ Comparability needs to be redefined in the context of a large and diverse sector.
- ◆ Academic standards for graduates are more implicit than explicit.
- ◆ Satisfactory academic performance at honours level is pitched somewhere in the second-class category.
- ◆ Establishing threshold standards does not appear to be possible at the level of broad subjects and would be difficult at the level of sub-disciplines.
- ◆ The possibility of agreement on the qualities expected of graduates, including generic attributes and skills, as a basis for threshold standards is worth exploring.

This important report takes the place of our usual Editorial, which can be found on page 16.

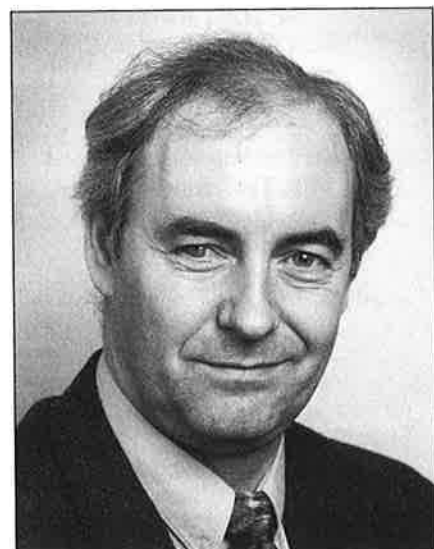
IMPLICATIONS

Judgements of academic standards are generally rooted in the implicit, shared values of a specialist academic community because they derive from expert practice that is only possessed by that community.

There is a lack of explicitness in defining the intended outcomes of degrees and the criteria against which these are assessed. Even when this is attempted, it appears only to have a limited effect on how assessors make their decisions.

Frequent interaction of academic peers is essential to the development of a common understanding of standards on which academic judgement ultimately rests. It may be important to provide opportunities across institutions for sharing of perspectives on the setting, measuring and monitoring of standards.

At present, as a consequence of the way in which academic standards occur, there are no generally and publicly agreed measures that enable a secure judgement to be made as to whether the standard of one degree in a given class in a given subject is comparable to that in another



institution, or whether there is comparability across subjects or over time.

THIS REPORT

The draft report on the GSP (November 1996) is based on the second stage of the programme. Here the findings in relation to Assessment Practice are summarised.

WHAT IS A GRADUATE?

Institutional views

It is possible to identify common attributes across subjects, but the extent of agreement on these attributes and support for the notion of gradueness varies across faculties and subjects.

General academic skills or abilities such as critical reasoning, analysis, synthesis, evaluation and the identification and solution of problems

were cited as attributes of gradueness. Certain skills of general application are also important, and include communication, IT, time management and team work skills.

Subject views

Traditional academic fields inclined to the view that the characteristics of a graduate, if definable at all, are subject specific. Nevertheless, even those most suspicious of a generic approach endorsed some generic attributes, provided these were contextualised for the subject in question. Among these attributes are communication, research and data retrieval skills and critical thinking, along with synthesis, reflective practice, independent motivation for learning, interpersonal skills and time management.

Five broad attribute categories proposed by the Graduate Attributes Profile (GAP) scheme were judged to be appropriate and there was agreement that these were generic. The categories were: intellectual, subject mastery, interpersonal, individual and practical.

Some subjects acknowledged that, with the expansion of knowledge within their fields, the acquisition of generic skills such as learning how to learn or information retrieval was becoming increasingly important.

It is not surprising that representatives of subject-based bodies placed the greatest emphasis on those characteristics specific to their particular subject. What is significant is that they were then prepared to sketch out qualities that are broadly common with those identified by cognate fields, if not more widely.

Student views

Students see 'gradueness' principally in terms of employability and the development of skills and personal attributes, often in ways that are coloured by values derived from the

world of work. Mature students differ from their younger counterparts in that they give greater emphasis to personal development than to employability.

Students perceive there to be three groups of attributes: traditional academic skills, personal development skills and enterprise skills.

It is noteworthy that many students do not lay the same emphasis as academics or institutions on the significance of a grounding in a specific discipline, but see gradueness in its relation to employability and to personal development.

Employers' views

Employers viewed desirable graduate attributes around categories used by the NCVQ: communication, application of number, problem solving, working with others, and improving one's own learning and performance. Communication and team-working skills are seen as a high priority, but are regarded as attributes which are rarely and insufficiently developed in the education system.

In short, employers emphasise personal and inter-personal skills and adaptability to and within the world of work, rather than subject expertise (but it is likely that they take such expertise for granted in academic courses).

ASSESSMENT

A project commissioned by HEQC investigated the extent to which student assessment focuses on generic attributes and whether these attributes might play a part in determining threshold standards. The findings are summarised below.

Examiners use remarkably similar language to characterise the qualities sought in their assessment practices, not merely within a particular subject, but across subjects. However, the common vocabulary is not used to



describe the same attributes in every case.

There are difficulties with the definition of level and specifically whether it can be distinguished from the activity of ranking the relative performance of a population of students who have undergone some particular form of assessment.

Written instructions, marking schemes and criteria, do help to inform and support assessors' judgements, but do not provide a substitute for assessor interactions over time, the internalisation of exemplars, and the creation of assessor networks which are necessary to provide consistent assessment decisions among assessors.

The main conclusion was that there is no reason to suppose that the use of a common language across subjects and institutions means that academics are

employing a model of assessment in which cut-off points are the same.

IMPLICATIONS

There is a need to protect standards by identifying and developing ways of clarifying and strengthening academic peer judgement. Clarity and consistency of judgement are enhanced by greater explicitness, and the use of devices such as marking schemes and exemplars, the establishment of archives, and so on. But what is also required is the provision of new opportunities for staff to discuss and compare students' work and the giving of pride of place to assessment in the process of programme design and validation.

The project, as other GSP work, found little evidence that the adoption of such measures was widespread - indeed it appeared that changes such as the reduction in double marking were making it harder to socialise assessors and maintain reliability.

At present, the practice of assessment is incompatible with the notion of a threshold that defines a sector-wide set of outcomes that would define explicitly and meaningfully the attributes either of a particular sort of graduate, or graduates as a whole. There is a need to provide a language with which to chart the diversity of the sector, together with a means by which to maintain consistency of standards.

MAIN CONCLUSIONS

Further development work needs to be undertaken to identify the qualities expected of graduates.

There is a need to create a common vocabulary with which to describe the attributes, standards and levels. There is a need to develop mechanisms to strengthen the exercise of shared academic judgements. Boundaries or thresholds to mark the limits of awards

(diploma, degree, honours degree etc.) must be determined.

Any consensus as to what *comparability* might mean points to two dimensions:

Coverage. This concerns the attributes expected of someone whose performance has reached the threshold standard for a particular award. For example, graduates in a particular subject or programme would be expected to know, understand and do certain things.

Attainment. This concerns the specification of how well a graduate would be expected to demonstrate any or all of the attributes.

In practice these two elements are interactive. Excellence in the demonstration of one attribute may often compensate for inadequacy in another and examiners try to reach an overall judgement which is not simply the sum of the marks of each item of assessment.

However, standards can only be fixed in relation to specific, explicit learning objectives and performance criteria, interpreted through a common assessment culture based on shared practice.

Direct methods of establishing threshold standards, such as the specification of subject-level standards, of common curricula, or of generic attributes can be useful, but indirect means probably determine a more useful way to begin. They include:

- ♦ developing a range of generic dimensions for degrees that express degree outcomes such that individual programmes or elements can be profiled in relation to this range;
- ♦ promoting greater clarity and explicitness as to the nature of different awards, both at national and institutional levels;
- ♦ fostering the harmonisation or

convergence of rules and procedures governing assessment practice;

- ♦ finding the means to clarify, make more explicit and strengthen the judgements of academic peers;
- ♦ developing greater consistency in grade boundaries and the specification of relevant assessment criteria.

ON 'LEVEL' AND 'CREDIT'

There are signs of a movement away from a traditional view of level, couched in terms of years of full-time study, to one defined in terms of the particular characteristics of learning expected at different stages of a programme. However, credit is usually related to the notional amount of time that it would take the average learner to achieve the learning objectives or outcomes attributed to a module or unit of learning at a given level.

A SHORT SUMMARY?

Key themes include:

- ♦ a need for greater clarity and explicitness about what is expected of and attained by graduates;
- ♦ measures to strengthen the security of standards;
- ♦ a redefinition of comparability of standards in a changing context.

The efforts of individual institutions, groups of institutions and subject/professional groups to respond to rapid change need to be supported by some wider collective frameworks.

Ivan Moore is Assistant Director of Education Development at University of Ulster, and is Chair of the Editorial Board of The New Academic.

As this report concerns every reader of *The New Academic*, we will welcome comments on this summary - or on the full report out in June. Send to Ivan Moore or the Editor.

Peer Assessment in Music



Tim Ewers and Michael Searby discover that requiring students to assess each other's work helps them become actively involved in the learning process. The authors' initial scepticism gave way to enthusiasm. Their students were studying music, but the arguments will apply to many other subject areas.

Peer assessment is a technique that, through devolving some responsibility for assessing work to students, makes them think about what actually constitutes a good piece of work; it enhances their critical and analytical faculties and enables them to become active participants in the learning process rather than passive absorbers of information.

The reaction of a former colleague at the University of London to the news that I had been asked to take part in a project on peer assessment at Kingston University was:

Oh my God, you're not getting involved in that - it's like letting the lunatics run the asylum".

Something of this scepticism coloured my own initial opinions, but I soon realised that peer assessment did not involve handing over the ultimate responsibility for marking work to students.

Tim Ewers

techniques for notating, organising and extending musical material and encouraged to express their compositional ideas in a creative, imaginative and contemporary manner.

This subject area seemed ideal for peer assessment as it is not knowledge-based but creative in nature. Assessment of this subject does not, therefore, rely upon the assessor possessing a large body of factual information but on the ability to judge the effectiveness of the application of a number of criteria.

Peer assessment is not a new idea, of course, having appeared in HE throughout the last 20 years in various guises. We were, though, unaware of its usage on a music course and so had to convince ourselves, colleagues in the school of music, and the students, that using it would be both appropriate and beneficial.

A survey we conducted into student attitudes lists the possible advantages as:

- ◆ a sharpening of students' critical faculties;
- ◆ a quicker response to and turn around of work;
- ◆ a saving of staff time;
- ◆ a greater willingness of students to contribute to critical discussion.

At the start of the project, it was



Tim Ewers

these aspects of peer assessment that were promoted as potential benefits.

The pilot scheme in composition was set up in consultation with James Wisdom of the Educational Development Unit with whom the following guidelines were devised:

- ◆ i) the establishment of a full training programme in appropriate assessment approaches for students;
- ◆ ii) the establishment of clear criteria of assessment which would be negotiated with the student group;
- ◆ iii) the establishment of clear and efficient management systems;
- ◆ iv) giving credit for the quality of student input in their peer assessment;
- ◆ v) the introduction of a system of moderation and appeals.

Our intention was eventually to introduce peer assessment to a number

Peer assessment was introduced in 1992 in Kingston University's Music Department to a second year course in composition in the BA(Hons) in Music. In this course, students are trained in

of curriculum areas and the guidelines were, therefore, broadly drawn in order to allow flexibility for lecturers on different course modules. With the exception of giving credit for the quality of student input, these guidelines have remained in place for all the peer assessment work subsequently carried out in the School of Music.



The pilot scheme had the following management system:

- ◆ Lecturer sets an exercise and a deadline for the work to be handed in.
- ◆ Students do the exercise and hand it in to the lecturer.
- ◆ Lecturer initials the work to show it has been handed in on time and redistributes it to other students for assessment.
- ◆ Students assess the work, writing a short report and giving it a mark before returning it to the lecturer.
- ◆ Lecturer looks at all the work adding comments and moderating marks where necessary.
- ◆ Lecturer awards a mark to each student for the quality of their assessment and combines it in the ratio 20:80 with the mark awarded to their own work to produce an overall mark for the exercise.
- ◆ Work is returned to its authors.

Many students and lecturers felt that in assessing work, students would favour their friends, or that they would find it impossible to adequately apply the assessment criteria. In view of this, the system set up employed a comprehensive checking procedure to ensure that there were no miscarriages of justice. If the system was to work, it had to have the confidence of all those

using it and the lecturer, therefore,



oversaw and checked every stage of the operation.

ESTABLISHING CRITERIA

At the outset of the course, the students were asked, in small groups and later as a whole year group, to discuss what constituted a good composition and to draw from these discussions a series of assessment criteria. We could have given them a pre-prepared set of criteria, but felt that it was important that the students worked out their own terms of reference so as to think through the process properly and come to terms with what they were being asked to do. The lecturer was present throughout the discussions and could intervene if s/he felt that any serious oversights were being made. In practice, it has not, however, been necessary for lecturers to intervene in this process. The wording has varied from cohort to cohort, but the criteria have remained quite similar, and all the staff involved have stressed the importance of allowing the students to work out these criteria for themselves so that they may 'own' the process and not feel lecturers' values have been imposed upon them.

A typical set of composition assessment criteria:

- ◆ Does the work fulfil the requirements of the brief?
- ◆ Does the music have a clear shape, structure and coherence?
- ◆ Does the composer develop the musical ideas?
- ◆ Does the music show an individual and personal voice?
- ◆ Is the music appropriate for the instruments, showing an awareness of texture and timbre?
- ◆ Is the notation clear and legible?

It was made clear to students that the order in which the list was drawn up implied no ranking and that each

criterion did not account for a specific proportion of the marks awarded; indeed, for different exercises, the different criteria were likely to assume different relative importance.

Important to the process of building confidence were the training sessions. Having worked out the assessment criteria, students were then given the opportunity to try them out in 'dummy runs' on work by past students.

MODIFICATIONS

Although the initial scheme ran smoothly, it became clear that, because of the moderation process, it took much more time to administer than a standard assessment would. (This point has also been observed by Brown and Knight, 1994:58.) We therefore had to decide whether the other benefits were sufficient to justify continuing the project. Our initial feedback suggested that staff valued highly the increased critical involvement of students and so working parties of students and staff were set up to discuss possible ways of streamlining the system. The outcome was a decision to change the type of peer assessment, from one where a single student was responsible for assessing the work of one other student, to a group system where five or six students jointly assessed a similar number of pieces of work.

Although the initial system had worked well, producing results that needed only minimal moderation (94% of marks were moderated by less than 10%) students felt more comfortable with the idea that a number of different opinions would be expressed about their work. In the School of Music, a system of group tutorials already existed and it was decided to co-opt some time from these sessions to carry out peer assessments. A further bonus for the streamlining of the system was that a

lecturer would be present at these tutorials and could moderate the assessment process as it happened. The lecturer could suggest ideas or remind the students of criteria that had not been addressed but would not interfere unduly in the process. Her/his role would be a supporting one, giving the students the confidence to make assessments sure in the knowledge that they could, if necessary, be guided in their decision making.

This group system made it difficult to give credit for individual contributions so this aspect of the original guidelines was dropped. Students did not, in any case, feel that it was necessary to be awarded marks for assessing, preferring their marks to be based solely on the quality of their own pieces of work.

CONCLUSIONS

With a few minor changes, the peer assessment system in first and second year composition has now been running in the manner described above for three years. The students have been asked each year to complete surveys detailing their opinions on this scheme (this is outlined in detail in Searby and Ewers, 1996). Following the success of the revised scheme, the research project has gone on to introduce peer assessment to modules in: Performance; Music, Performance and Communication; Music and Business; Music Technology. The process of refining the application of peer assessment to suit the different requirements of all these courses continues, but detailed in the box is a summary of what we have concluded from our experiences so far.

Above all, introducing peer assessment encourages students to 'own' the assessment process and to understand how it operates in considerable depth.

Aspects of Peer Assessment

- ◆ Peer assessment focuses students' attention on what makes a piece of work successful. It encourages them to acquire analytical skills and a practical knowledge of how to apply them. In improving students' analytical and critical skills, it allows them, through self assessment, to apply this critical thinking to their own work and so improve it.
- ◆ Peer assessment is, in most circumstances, best undertaken by small groups of students. Having a variety of different opinions decreases the likelihood of getting a rogue result and increases the confidence of those being assessed that they are being treated fairly.
- ◆ In order to maintain confidence that peer assessment produces fair results, lecturers must be seen to monitor and, when necessary, moderate student assessments. The most efficient way of doing this is for a lecturer to be present at group peer assessment sessions. It is important, however, that the lecturer handle student assessors sensitively and avoid dominating the proceedings.
- ◆ Carefully explaining the reasons for introducing peer assessment and the fact that it is an educational tool designed to benefit students is necessary to gain support for it and to avoid some students' thinking that it is merely a method for reducing staff input to a course.
- ◆ Peer assessment is a method which encourages the acquisition of critical and analytical skills. As such it should be treated as part of the learning process, and is, therefore, most appropriately used in assessing a series of formative exercises, possibly leading to the assessment of a summative piece of work. Using peer assessment solely to assess a summative piece of work may be successful from the point of view of acquiring a 'fair result', but does not give the student the cumulative educational experience of using peer assessment throughout a course.
- ◆ Peer assessment seems to work particularly well in subject areas where aesthetic judgements are important and knowledge and reasoning less so (e.g. composition and performance). Peer assessment can be successfully employed in knowledge based subject areas if applied to small scale formative pieces of work with limited and carefully explained requirements. There will, however, remain the problem in subject areas such as history, harmony, or musical analysis of students not having a broad enough body of knowledge to be able to usefully or fairly assess large scale summative pieces of work. They may, though, gain some educational benefit from the experience of attempting such assessments.

We have found that this makes students much more critical and questioning in their approach to all their assessments, which in turn benefits both the students themselves and the course as a whole.

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An Exercise in Student Self-Assessment



Ken Hahlo tells us about his own experience of getting students to assess their work. He finds it can be a positive experience for the individual student, the class as a whole and the tutor. His students were taking Sociology, but as we so often find, this approach could be followed by teachers in many other areas.

HOW IT WORKED

First year students taking Introduction to Sociology were told at the beginning of the semester they were to mark their own work. The students were in two separate classes: *Class A* was made up of 13 full-time first year students and *Class B* was a part-time class of 18 students who were in the second year but taking the second half of their first year course. The parameters of the exercise were defined and I told the students that I would go over the marking scheme at the appropriate time at the end of the course.

Although some were worried, I assured them that they would receive help with the exercise. None had any experience of marking and all of the part-time and a few of the full-time students had been out of a learning environment for a number of years. In general, the full-time students were younger than the part-time students, most of whom can only study in the evening, as they are in paid employment.

Class A was set an essay and a self-selected project for library research.

Class B was set the essay only.

In the twelfth week of the semester, the work was submitted to the Divisional office for recording and then passed on to me for marking. The students were informed that they would be expected to mark their work during the lecture and seminar periods the following week. I received 31 essays and 13 projects the day after their submission and set myself a week in which to assess them.

The Institute's marking scheme and an itemised essay marking schedule were used to mark the work. I also made short notes on each essay on a separate sheet to support my mark and to use for feedback. In addition, I asked a colleague to read through some essays that I had marked, to establish that the standard of marking was acceptable.

The following week students received their work without any mark on it. They were asked to bring with them the course document in which is set out the marking scheme for the Institute and I gave them the itemised marking schedule.

All the students, with the exception of one, attended their respective classes in the next week. Given the way in which the timetable is organised, we had three hours to complete the task.

The students were asked to study the itemised marking schedule, and were also informed that if they gave their work the same marks as I had, they would receive an additional 5% for being critical of their work. Then I asked them to mark their own work.

As soon as students completed the exercise, they came to a room where we could discuss the work without disturbing the class. First, we compared marks, then we compared our marking of the itemised schedule. Then, using the notes I had made, I explained how I had arrived at my mark.

RESULTS

Generally, most (78%) of these students gave their work a lower mark than I had, while a fifth (21.9%) gave a higher mark. One gave the essay the same mark as I had, while seven students came within the 5% of my mark. The whole exercise was completed within three hours.

STUDENTS WERE POSITIVE

When asked to explain their marking, many made observations about their essay writing abilities that were remarkable close to my own. They said that they had found the exercise far more instructive and interesting than they had expected, but above all they valued the feedback. Even though they received nothing in writing and there were no written marks on the essays or projects, they said that it was valuable. They raised issues about essay writing, which otherwise might not have been discussed, and some took notes of our discussion. None disagreed with the final mark.

One student had asked some of her classmates to read her essay. They thought that it was excellent. So she changed her original mark, which was within 3% of my mark, to give it over 70%. In our discussion, she accepted my reasoning and agreed that if she had not given the essay to her colleagues, our marks would have been similar.

The value of the feedback was increased by the students' becoming part of the marking process; it gave them ownership of their marks. They raised issues of essay writing with me without feeling that they were making their 'weakness' public in a class situation, or viewing my criticisms as comments to which they could not relate directly.

There were other positive results: all students knew their marks immediately and could go away to prepare for their examinations knowing them. My rapport with the classes improved. In their assessment of the course, all students commented on the value of this exercise. One class, which felt that they had not been offered a full choice of modules at the beginning of the year and so were slightly antagonistic towards me as course tutor, and to Sociology as a subject, after the exercise became more

supportive. Many realised that the exercise had made clear to them what criteria were being used to mark their work and that they had part ownership of their mark.

COMPARING MARKS

Part-Time Class: 16* students

Marking	Student	KH
Total marks	890	955
Range:	43-75	45-70
Mean:	55.625	59.6875

*Marks of two students are excluded: one was absent on day of marking and other was a late submission.

Full-Time Class: 13 students

Marking	Stu	KH	Stu	KH
	Essay		Project	
Total marks:	672	694	890	955
Mean:	51.7	53.4	55.6	59.7
Range:	44-65	40-66	35-70	50-70

The exercise also had positive benefits for me as the tutor. Besides forming much more positive relations with the students and the class as a whole, I found that I had marked the essays quickly and that I targeted the key criticisms, while the itemised schedule identified general criteria.

A further benefit was that all 44 pieces of work were marked and second-marked within a week. The speed of the exercise was a reward in itself. This came about by not having to ask a colleague to second-mark at a time when s/he would be equally busy marking.

Finally, I found that my attitude to marking changed, when I realised that the additional 5% the student would receive if they gave their work the same mark as I had introduced into the marking an element of flexibility that is not present when a colleague marks the essay. This meant that an essay that was a borderline could have the marked raised by the student, if they could show a critical awareness. In other words, the final mark did not end with what was in the essay, but could be increased by the student's own effort.

CONCLUSION

Possibly the experiment worked, if for no other reason, because the numbers in the two classes were low. I recall a visit to the Institute from Trevor Habeshaw many years ago, when he spoke of the need to reduce time taken up by marking work. As the experiment was organised, I would argue that my marking time was reduced, because I did not mark the essays in detail. I summarised my comments and gave these verbally to the student. Colleagues point to the impossibility of carrying out this project with a class of a 100 students.

I also am unsure whether or not, at the moment, an external marker would be prepared to accept a student as the second internal marker. This project might work if the main marker were postgraduate students and I acted as a final marker who checked for standards, read through the comments on each piece of work (these would amount to little more than a short paragraph), and could act as a final arbiter in case of dispute. Possibly an external examiner might accept this system, on the grounds that the student is not the only second marker. What I shall be interested to see is how this exercise has benefited the students in their second and final years.

Acknowledgement

I would like to thank Dr. Peter Knight (Lancaster University) for having read through this paper and for his encouragement.

Dr Ken Hahlo is Senior Lecturer in Sociology at Bolton Institute of Higher Education, Bolton.

1997 is SEDA's YEAR OF STUDENT MOTIVATION

Contributions for the Autumn issue of *The New Academic* should be sent to Ivan Moore at the University of Ulster, BT37 0LB

Peer Observation of Teaching

Can peer observation in HE bring about meaningful change in the way lecturers teach, or is it just a meaningless exercise carried out to keep the teaching quality assessors happy? *Paul Orsmond* reports on a pilot study which shows that, far from being a hoop to jump through, the peer observation process can have clear benefits for the practising lecturer.

For many years, the Division of Biology at Staffordshire University has had an informal arrangement, whereby a small proportion of staff (approximately 5%) observed their colleagues' teaching, on an ad hoc basis, and then held informal discussions after the observation. Not all lecturers were aware of this process and so, during the academic year 1995/96, the Division decided to give this observation process more structure.

There were three reasons for this decision.

- 1 A number of staff on the Teaching Certificate in Higher and Professional Educational had carried out peer observation as part of an assignment, and reported that overall the process had been very helpful in making them more aware of the teaching and learning process.
- 2 Some lecturers felt that being observed and the subsequent feedback discussions led to improvements in their presentation, which would increase student learning.
- 3 As the observation of teaching provides evidence of teaching quality, it was felt that the procedure would help in preparing the Division for the teaching quality assessment (TQA) assessors.

AIMS OF THE STUDY

The study had three aims:

- ◆ To encourage lecturers to reflect on their teaching process.
- ◆ To provide additional feedback to lecturers concerning their involvement in the teaching process.
- ◆ To encourage lecturers to be more innovative in their methods.

PROCEDURE

The procedure was based on two main guidance sources:

- 1 SEDA paper 79, *Observing Teaching* (Brown et al., 1993), offered a range of practical help. Specific attention was given to the three opening chapters which deal with the methods and ways of observation, and chapter nine which provides comments on the role of peer observation in HE and checklists.
- 2 The guidelines for the observation of teaching produced by University Staff Development Unit (USDU) which present a model for training HEFCE TQA assessors (Brown, 1993). The section entitled "Some observations on Observation" is particularly pertinent as it offers accessible information on pre- and post-observation meetings.

The procedure for the peer

observation of teaching within the Biology Division was carried out in three stages.

Preparation for Observation.

The observer and the lecturer would meet, at a mutually agreed time, to discuss aspects of the learning activities to be carried out in the observed session. The observation process was to be non-judgmental and supportive.

Agreement would be sought on which session was to be observed, what was to be observed, and what checklists if any would be used. All discussions between the observer and lecturer were to be confidential.

The Observation.

During the observation, the observer was asked to give particular attention to specific points discussed in the pre-observation meeting, although general observations not previously discussed could be made. Both the observer and the observed lecturer were encouraged to write up their comments for discussion in the post observation session.

The Follow-up Discussion

The purpose of discussion and analysis after the observation was to

promote an objective but informal view of the session. This allowed the lecturers to gain both from the independent perspective of the observers and, most importantly, from their own reflections on their learning session. The observers were asked to be sensitive, positive and constructive in their comments.

PROCESS MANAGEMENT

Introduction of the process.

It was important that the concept of the peer observation of teaching was introduced to all teaching members of the Division. This provided an opportunity for colleagues to discuss how the process could be structured and managed. It was not necessary that all members of the Division believe that the process would be successful. There were, and still are, sceptics within the Division. What was essential was that all were prepared to cooperate and work together during the pilot study and subsequent evaluation. Team work and the cooperation of colleagues are of paramount importance in peer observation.

For the process to be carried out successfully, the cooperation of the Head of Division (HOD) was also required. It was made clear that the process would not be used as an 'appraisal tool' and no member of staff should feel threatened by the process. The HOD had been part of the previous ad hoc system and was invited to join in an observation trio.

Selecting the observation teams.

The Biology Division has four sections, Biochemistry / molecular biology, Ecology, Microbiology and Physiology, which encompass the range of biology learnt by the students. Although all members of the Division were happy to participate in the observation process, for organisational

reasons, only nine out of the eighteen members of staff were able to operate this pilot procedure. Observation trios were formed with staff from each of the subject groupings.

It was agreed that in the first year, two observations a semester would be made. Thus in one year, everyone in a trio made at least four observation, and was observed on four separate occasions. The trios functioned independently, but an overall coordinator was appointed to deal with any procedural or implementation problems.

Evaluation

A quantitative evaluation was carried out using two questionnaires, one to be completed from the perspective of Observer, the other from that of being Observed: each was asked to rate the process on a three point scale (more/less/neutral) on a small set of potential benefits. A qualitative evaluation was also carried out where individual teaching members of the Division were interviewed by the coordinator. This allowed for a free exchange of ideas on the personal outcomes of the process.

ON BEING AN OBSERVER

The role of observer had, in many cases, a positive influence on the lecturer's own teaching. Eight lecturers found the process made them think more about their own teaching and was beneficial i.e. it brought positive gain to their professional teaching. Five found it helped them gain confidence and six found the process had been enjoyable and made them more self critical. As observers, all lecturers took notes during the learning session, but only two used the specific forms supplied (taken from Brown et al., 1993). Two members of staff found the forms and

checklist were "excessive and difficult to use in the time allowed". The majority of lecturers did not change their style of observation with increased practice, but it should be remembered that only a limited number of observations was made. Although over half the staff found the feedback after the learning session helpful, the majority thought the feedback more helpful for the lecturer being observed than for the observer.

ON BEING OBSERVED

Most lecturers found that being observed during a learning session had a positive influence on their teaching. All lecturers had a pre-observation session hours or days in advance of the lecture and generally lasting 5-10 minutes. At these meetings, the main area for discussion was placing the observed learning session in the context of the whole module. Four lecturers also discussed specific areas of lecturing, i.e. clarity of overheads, pace of lecture, information delivery, interaction with students, and structure and use of handouts.

Three lecturers considered the aims and objectives of the module and how these emphasised or developed the overall modular aims and objectives. For example, where an overall modular aim was to enhance the students' data handling ability, they considered how efficiently the students were instructed within the modular learning time to deal with data handling questions. Most (seven lecturers) said they found the meeting helpful, and only two said they altered their learning session preparation knowing that they were going to be observed.

After the learning session all lecturers had a feedback session which in four cases occurred minutes after the lecture, and in five cases, days later.

Eight lecturers felt these sessions could help give focus to subsequent observation sessions and all found this discussion time useful.

EVALUATION

For many lecturers it was clearly a productive experience. A fairly inexperienced member of staff said it was interesting to see the attitude of senior members towards the students.

"It was good to watch how enthusiasm was generated and how the lecturer fed off tiny clues and body language from the students."

He explained that he was made aware that the more experienced staff member observed small changes in the students, either as individuals or as a group, which he had not perceived, and the experienced lecturer was then able to adapt or change the direction of the lecture and thereby enhance the student experience.

While all staff were in favour of developing good practice, not all staff found the peer observation process worthwhile. One lecturer commented the repeated sampling of lectures was "unhelpful". Another felt that the peer observation process was "artificial", because to benefit fully from an observed learning session, it was "important to know what had occurred in the learning session before the one observed, and to know how the information given in the observed session, was developed in later sessions".

DISCUSSION

Changes in teaching practice within the Division have occurred as a result of the peer observation of teaching programme. For example, some lecturers have introduced structured breaks into their lectures, during which mini data-handling exercises can be

carried out. Lecturers have also changed their style. One colleague now varies the way his lectures are introduced, for example by using a short video, a questions session, or a review of the previous lecture. Another introduces structured summaries during particular lectures. Furthermore colleagues appear to be more aware of their own delivery style. One comment illustrates this.

"I became more aware as a result of the programme that I was repeating the same information far too often. The programme was helpful in that it told me when to shut up."

Comments from lecturers

"Teaching can be an isolated activity and the observation increased a sense of community within the division."

"I enjoyed seeing the variety of learning session approaches used."

"Students like to see staff observing each other."

"It was useful having a student perspective."

"Talking to colleagues about the art of teaching was refreshing."

Clearly, there are dangers. Colleagues becoming aware of an innovation or different approach could lead to the whole Division introducing the innovation or approach into their own teaching programme thus destroying the activity by over exposure. Diversity in teaching style is a lecturer's strength and should be encouraged. Furthermore, lecturers need to be comfortable with their own delivery style and with the way they use teaching and learning material. It would be wrong if, as a result of the peer observation process, lecturers felt shoe-horned into something they were not happy with.

A difficulty when carrying out peer observation of teaching for the first time is that the observer is unaware of

what the experience will be like. This is an important point to stress to those wishing to undertake the process. Indeed a number of repeated observation sessions over a period of months may be required for observers really to begin to understand their role. Therefore, when the process is first introduced, the observer often just wishes to observe the lecture in a shot-gun fashion, taking in everything. Only with experience can the observer start to become selective. Likewise, it is often difficult for lecturers being newly observed to be able to focus in the pre-observation meeting on specific aspects of their teaching style. For this reason, much of the published documentation can seem forbidding. It assumes a lot of prior knowledge on the part of the lecturers implementing the process.

The published checklists are a particular example of this and for those undertaking the procedure for the first time a blank sheet of paper may be all that the observer requires.

During the initial observation it is important to become relaxed. As the process of peer observation continues within the Division, colleagues may become more comfortable with the role of observer, allowing for suggestions to be brought together to develop observation forms, which meet the specific needs of your particular field. The observation forms used on TQA visit (HEFCE) are uncluttered and manageable in comparison to some forms used in this pilot study.

The majority of lecturers are happy to carry the process on. Some wish to have mixed specialised trios (indicating that "if you observe someone from your own specialisation you are often more concerned with content than delivery") while others are happy to remain in their specialist trios as it is useful to "find overlap of ideas".



THE FUTURE

In continuing the practice, we will keep some aspects of the peer observation process e.g. the pre- and post- observation meetings. However, some changes will be encouraged.

During the pilot study all observation were carried out in lectures and, as the majority of colleagues believe that being observed by their peers can be beneficial to student learning, it would be desirable to increase the range of learning sessions observed to include tutorials, practical and even fieldwork. The TQA assessors will look at all aspects of a Division's teaching and learning activities.

Although this pilot study was carried out in the Biology Division, similar approaches could be taken within other disciplines. Introducing a programme of peer observation of teaching is something to be strongly advocated. Some of the benefits have already been illustrated but, a further benefit, which may not initially be obvious, is that of staff development. For colleagues to

become more confident with the increasingly diverse range of teaching and learning activities, faculties will need to provide suitable staff development. The peer observation programme may allow staff the opportunity to identify specific areas where they may have had difficulties implementing a new technique or methodology. The opportunity to identify areas for staff development as a result of the peer observation process should not be underestimated. Universities are having to become more discerning in how they best use their resources, and the peer observation process allows staff to focus on activities that will lead to improved learning sessions.

For most colleagues within the Division, peer observation worked well. In addition to benefits to individuals, it has been useful to the Division as a whole. As a clearly defined process it has helped the staff focus on their learning sessions and facilitated the dissemination of good

teaching practice. There is clearly much to do in the future, but the value of the peer observation process is clear (UCoSDA, 1996). Peer observation of teaching and learning is one of the most effective ways of enhancing quality within learning sessions.

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Suspense and Surprise in Large Lectures

Continuing our occasional series on the Art of Inspiring Students and the Art of Lecturing, *Helen Pennington* combines the two. She shows how she uses the surprising results in many psychological investigations to help her students experience the process of discovery. This article should inspire lecturers in many subjects, not just social psychology.

Although the large lecture has obvious drawbacks, we can enliven it in various ways, as described by authors such as Benjamin (1991), Gibbs (1992), and Jenkins (1992), and Trevor Habeshaw (1995) and Paul Walker (1996) have both given readers of *The New Academic* stimulating ideas for getting audience participation. In this article, I describe three simple ways of introducing suspense and surprise into the large social science lecture.

My examples are all from the field of social psychology, although the general strategies described here could be used in other social science disciplines. Psychology lectures are particularly well suited to the use of suspense and surprise: the literature is rich in unexpected findings and in investigations which are ingenious, important, yet relatively simple. The lecturer can exploit these features to help students experience, in a small way, the process of discovery. I frequently use the activities described here, in introductory psychology lectures with up to 200 students.

"BE A RESEARCHER"

Ask students to "be" researchers.

Pose a research question and ask students to decide how to investigate it, before revealing what researchers have actually done. To make the experience more real, use emphatic language:

"You are a researcher. You want to find out... [describe the question]. How will you go about it?"

Give students a few minutes to write down their ideas, before telling them how a classic study was actually done, or how the question is typically investigated. It is often appropriate to ask a series of questions which retrace the sequence of steps in an investigation.

The following example is based on Solomon Asch's classic *conformity* experiments which he carried out in the 1950s.

◆ Begin by describing the original experiment. (Participants gave wrong oral answers to simple questions after hearing several fake participants give the same wrong answers.)



◆ Ask students to write down two possible reasons why participants gave wrong answers, and get them to think of how to find out which reason was crucial.

You may want to ask volunteers to call out their ideas, but the activity seems to work without such feedback. (The same general point applies to most stages of the activities described here: students can get involved without having to express their ideas publicly.)

◆ Show how Asch established that the participants had conformed mainly for public approval rather than because they really believed that the majority was right. (He got participants to give

their answers privately, and found that in this condition they were far more likely to give correct answers.)

- ◆ Describe what happened when Asch introduced a dissenter (a fake participant who gave correct answers).
- ◆ Ask students to write down two possible reasons why the dissenter caused a dramatic decline in conformity, and to think of how to discover which was the crucial reason.
- ◆ Describe the ingenious means by which Asch discovered that the key factor was the moral support provided by the dissenter in going against the majority rather than the fact that he gave the right answers. (Even when the dissenter gave answers which were more incorrect than those of the other fake participants, his influence in helping the participant stand up to the majority remained strong.)

“BE A RESEARCH SUBJECT”

Ask students to “be” research participants

When describing an investigation, ask students to imagine that they are the participants, and get them to guess the results. You can present an outline of the study gradually on an OHP transparency, with the results concealed until students have had a chance to predict them.

The following example is a version of a demonstration described by Osberg (1993), based on a classic “*cognitive dissonance*” experiment:

- ◆ Ask students to imagine that they are participants.
- ◆ “Assign” half the class to each experimental group.
- ◆ Outline the procedure, using an OHP transparency. (Participants performed a very boring task; they were then paid either a small or large sum of money for their services.)
- ◆ Before leaving, they were asked to tell

another potential participant that the task had really been interesting, and finally were asked to rate the original task on an “enjoyability” scale.

In describing the procedure, use direct language such as: “You are given this very boring task ..”

- ◆ Use a show of hands to find out students’ predictions of the enjoyability ratings participants would give.
- ◆ Reveal and discuss the actual results. (Those who had been paid the large sum rated the task as less enjoyable than those who had been paid the small sum.)

The researchers explained the results in terms of their *theory of cognitive dissonance*.

This technique is particularly useful when research findings are surprising. As Osberg (1993) points out, it can help to overcome the “*I could have guessed that*” phenomenon, the *hindsight bias* which can make students think that a lot of psychology is just common sense.

RE-ENACT RESEARCH

It is sometimes feasible to replicate part or all of an investigation during a lecture, as in the following examples.

The first demonstrates the “*mere-exposure effect*”, the tendency for people to like novel stimuli increasingly with greater exposure. This phenomenon helps explain why physical proximity leads to liking and friendship. The experiment is quick to carry out, and produces reliable results.

Without any introduction, display an OHP transparency with a list of nonsense words, some of which appear more often than others. (Do not draw students’ attention to the relative exposure frequencies.) Ask students to read through the list silently.

- ◆ Put up another list on which each

word appears once, and ask students to note down a rating for each word according to how much they like it.

- ◆ Ask students to work out their mean ratings for six of the words you select, which will be the three most and three least often presented words (you will not mention the exposure frequencies).
- ◆ Then use a show of hands to find out the results. Most students will prefer the high exposure words.
- ◆ Discuss the *mere-exposure effect*.

Occasionally, it is a good idea to get volunteers to enact part of an investigation in front of the class, as in this example, based on a study of “*administrative obedience*” by Meeus and Raaijmakers (1986):

- ◆ Tell students to imagine that they are the participants and you are the experimenter.
- ◆ Give the instructions: they are to administer a test, on behalf of the Psychology Department, to a job applicant. They are to induce stress by telling the applicant, during the test, that he is doing badly. Although the stress-induction procedure is part of a research project, any applicant who fails the test will automatically be rejected for the job (which is a real one).
- ◆ Tell the class to imagine that you go into the next room to speak to the applicant, and that you accidentally leave the door open, so that they hear what goes on.
- ◆ Get a volunteer to take the role of the job applicant for a few minutes; using scripts taken from the journal article, re-enact the scene in which the experimenter blatantly lies to the applicant. (The experimenter gets the applicant to agree to take the test by assuring him that it is only part of a research project, and that his performance will not affect his chances

of getting the job.)

- ♦ Ask the class how many of them would remain as participants after learning of the deception.
- ♦ Reveal and discuss the original results: 92 percent of participants did go ahead.

Students appreciate the surprises that come from participating in the activities described here. On several occasions, I have asked students to rate the lecture and activities by comparing them with standard lecture presentation of similar material. Students consistently rate the activities as more interesting than a simple lecture presentation, and as more likely to help them remember the material.

In my experience, the strategies described here do a lot to enliven large lectures, and there is good reason to believe that they enhance learning.

Helen Pennington is a lecturer in social psychology at Massey University, New Zealand.

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Editorial

The theme of this term's *The New Academic* is unmistakable: creating graduates.

Cover story is **Ivan Moore's** skilful summary of the 100-page HEQC draft report on Graduate Standards. Here he highlights the different views of teachers, students and their future employers as to what they think "being a graduate" means. He then examines the problems of assessing "graduateness" and the implications for standards and comparability.

Assessment is inevitably a constant theme in *The New Academic*, and this issue provides a number of different approaches to this essential task. **Tim Ewers** and **Michael Searby** explain how they involved students of music composition in a peer assessment project. They found that requiring students to assess each other's creative work enhanced their learning. The project was so successful it is now being adapted to other topics in the Music Faculty.

Self-assessment was equally successful, as **Ken Hahlo** found with his Social Science students. Everyone benefited, he believes, though he admits his approach might be cumbersome with a large class.

Peer assessment also operates among teachers, and they are as wary as any students of having a colleague judge their work. But **Paul Orsmond** reports on a project that left most people happy, not just the teaching quality assessors! Definitely worth reading.

More on the Art of Inspiring Students, this time from **Helen Pennington** who helps her students understand the process of scientific discovery. **Dilupa Perera** and **James Hartley** find that crowding *does* interfere with learning. And **Michael Gregory** gives practical advice to those teaching in HE who would like to improve their own graduateness by becoming a Doctor of Education.

A feast for teachers. Enjoy!

Elizabeth Mapstone

sagset

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The Costs of Crowded Classrooms

Do crowded classrooms affect how students learn?

Amid increasing arguments about the deleterious effects of larger class-sizes *Dilupa Perera* and *James Hartley* assess experimentally the effects of learning in a crowded situation.

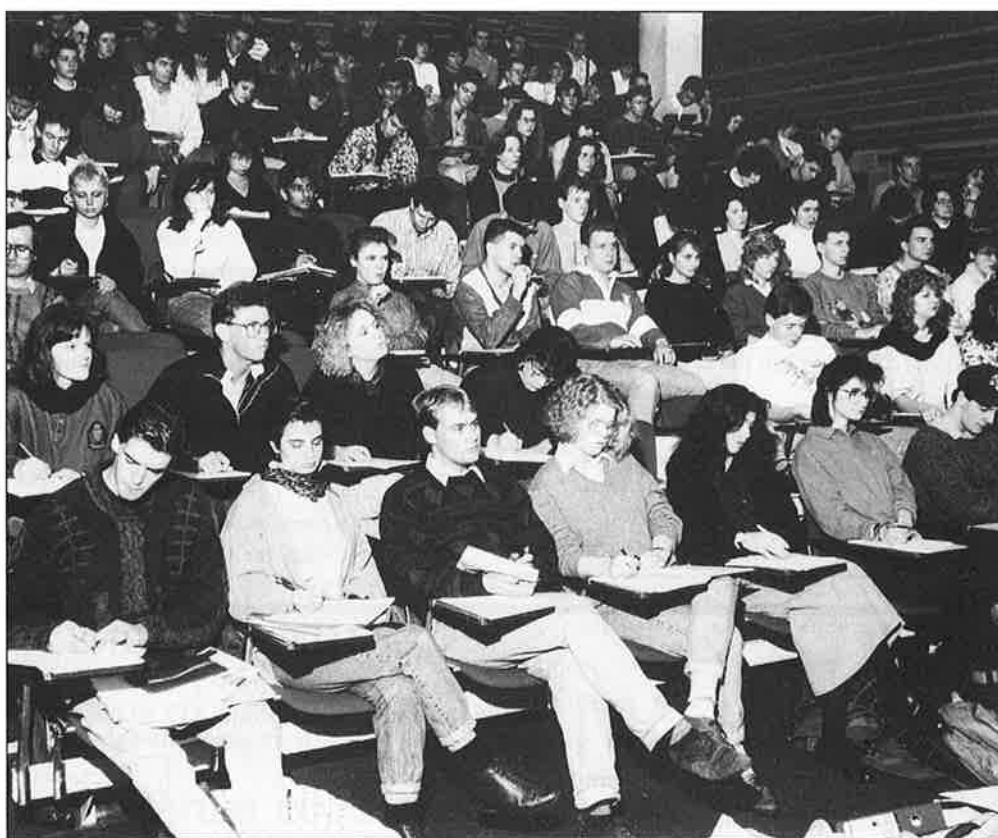
Student numbers have increased dramatically over the last few years, but most of our academic buildings have not changed size. This means that many lecture theatres and laboratories are now more crowded places than they once were. More and more students are being squeezed into the same space.

What effect does such crowding have on learning? In this country recent studies suggest that increases in class-size lead to worse performance (see, e.g., Fearnley, 1995; Gibbs, Lucas and Simonite, 1996). Similar studies, conducted in the United States, suggest that,

"In general large classes are simply not as effective for retention of knowledge, critical thinking, and attitude change." (McKeachie, 1994).

However, one conveniently forgotten study actually found a curvilinear effect between class-size and student evaluations (Wood, Linsky and Strauss, 1974)! Here increases in class-size (from classes containing less than 10 students to classes containing up to 250) led to poorer student ratings, but then, as the classes got even larger (up to 550 students), the ratings improved.

International studies also give us further food for thought. What is a small class in one country may be a large one



in the UK. (See box over page.)

Of course, students may not feel crowded in large classes if the settings are appropriate. We know of no studies of the effects of feeling crowded on academic performance. Related research has suggested that feeling crowded can increase feelings of stress, loss of control, and helplessness (Paulus, 1989), and we might expect these changes to be related to learning.

We set out to see if we could find

any effects of crowding on a simple recall task. Thirty-one biology students (10 men and 21 women) were asked to read a 160-word extract from a P. D. James mystery story for a period of five minutes, and then to write out what they could remember of it. The students did this task in a crowded room, where all the seats were occupied, and the space between them was small.

An additional thirty-one students (18 men and 13 women) did the same task in

the same room, but this time in an uncrowded situation. Now only five or six students at a time did the task, all seated well apart from each other.

Statistical analyses of the results that we obtained showed that the students in the uncrowded situation recalled significantly more information from the text than did students in the crowded one. In addition the women students recalled significantly more information than the men students, irrespective of whether or not the room was crowded. These results are shown in the table below.

These clear-cut results, of course, come from a rather artificial situation. Clearly this is a single study, focusing only on one type of learning. Nonetheless, the results suggest that crowding affects learning. Educators would therefore be wise to take note of

Average percentage recall scores
Crowded Uncrowded

Men	27	44
Women	36	54

these findings in all potential learning contexts ranging from lecture halls to libraries.

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Crowding: one example

'Three times a week I face more than 400 students crowded into a lecture theatre designed for 280. The aisles are packed, many sit on the floor around the dais, some are outside, hearing what they can. There is no microphone. At the last count about a dozen of the students had textbooks. Many write on scraps of paper that they carry in plastic shopping bags. The students are black, from various language groups and many are barely functional in English, yet English is the language of instruction... It is not an uncommon situation, things are better at other places on this campus, other South African campuses are better off, and we are a lot better off than many institutions elsewhere in Africa and Asia. In such a context, what should be taught and how?'

Extract from Ruth (1996)

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Professional Scholars and Scholarly Professionals

Michael Gregory looks at the expanding horizons opening up for academics through the new British degree: the Doctorate of Education (EdD), and gives prospective candidates some practical advice on choosing the right programme.



Following the lead of Bristol University, now over fifteen British universities offer the Doctor of Education (EdD) degree. The EdD generally differs from a PhD in that there are taught elements, where students complete researched assignments for which they gain credit, before going on to design and write a thesis. The thesis itself, presented as a 30-40,000 word dissertation, whilst of a comparable academic standard to a PhD opus, is normally half its length.

The EdD is aimed at practitioners and educational leaders. This is reflected in the profiles of those registered for the degree, with the majority of professionals enrolled coming from educational management, administration and leadership roles, or working as senior teachers or lecturers in schools and colleges.

The vast majority of EdD students are obviously part-time, and the EdD represents a very attractive continuing professional development opportunity to a professional group to whom lifetime learning is a critical aspect of professionalism. These students bring with them their own professional expertise, of course. In terms of practice and educational leadership, this is frequently greater than that of the

university tutor who will be supervising - or as the Bristol programme indicates, *advising* - on the research programme. However, when this is blended with the university academic's skills of research and analysis, a powerful synergy for learning at the highest levels is possible, reinforced by a focus within the modules on participants' learning from one another. Because these senior managers and teachers are brought together in groups for three days, there is a great amount of peer challenge and support. A forum is established where theoretical constructs can be readily challenged and informed in the light of real practice - often by people at the critical edge of development.

INTELLECTUAL LEADERS

One of the criticisms of the EdD, and of other types of partly taught doctorates, has come from the traditional quarter which holds that taught doctorates undermine the academic integrity of the highly regarded British system. However, the EdD is there for the practitioners who are seeking the highest academic credential for their work and professional interest. Its purpose is the same as any other doctorate: to train intellectual leaders who are highly

skilled in objective critical inquiry and dedicated to its importance.

PROFESSIONAL AND SCHOLARLY

In essence the degree of Doctor is not a mark of professional superiority but a kitemark of intellectual achievement which is significant and special. Study at this level should, particularly for the post-experiential candidate, be in equal measures about developing professional scholars and scholarly professionals. This reflects the view that people enter graduate school to prepare or continue to develop their careers.

At doctoral level, this is either to become better professional practitioners or to become professional researchers. The elitist notion that any one form of doctoral achievement is superior to another fails to appreciate the transformative purpose of any such study at this highest of levels, and the generic professional aspects of

academic leadership and research, such as the focus on critical thinking, originality, high levels of communication of new ideas and the ability to stimulate others toward innovation.

At the University of Bristol, the academic success of the EdD programme is signified not just by the numbers completing - over 20 to date - but by the increasing number of publications written by course participants. A content analysis of these evidence the nature of reflexivity engaged in by practitioners on the course. Assignments and dissertations tend to be work-related investigations on issues of significance to the students' and their institutions. They are generally concerned with curriculum innovation and improvement or the development and implementation of new policy. Encouragement and support is given by an experienced team of tutors who help them to theorise their practice as well as to practise their theory. The degree itself certifies attainment of professional competence grounded in theoretical understandings - something that a PhD is not always designed to guarantee.

SURVIVAL

The decision by increasingly busy professional managers and teachers to undertake a lengthy period of part-time doctoral study at the same time as working in a demanding job is an important one and needs serious consideration before any final choice is made. Any programme must be supportive and its end result, as well as the process of undertaking it, should offer added value. EdD programmes are expensive. Fees alone are anything up to £10,000, and the demands on time and commitment can be high.

The EdD can certainly provide a survival toolkit for those working in the

complex and changing world of education; but the EdD itself also needs to be survived. Reflecting on my own experience, I would offer a number of points of advice to those considering embarking on an EdD.

The first is, do not start on the degree if you do not *really* want it. The right EdD will not only be highly demanding but exceedingly motivating. Dr Kate Myers, of the Institute of Education in London, has described her experience on the Bristol EdD as "intoxicating", and hers is not a unique recollection.

Family and colleagues will have to be convinced of your intentions if you are to obtain their backing - and their backing is important to your success. Certainly, my own success was only possible due to help from an effective and supportive group of colleague managers who assisted at critical times, and because my wife did not resent my long hours in my study.

Secondly, ensure that you have enough financial resources to support you through the degree. If you are fortunate, as I was, to have the financial support of your employer, this is very helpful. However, the experiences of many funded students is that they still have to find a number of significant costs out of their own pocket. In my case, additional costs were over £600 for the postal survey and interviews, about £2000 for travel to and from Bristol and accommodation, and about £6,000 on books, reports and conferences. I adopted a strategy that I would obtain further funding and designed a research project around my dissertation interest. This resulted in some external funding, which paid for most of these other expenses, and this is an approach worth pursuing. It also, I felt, gave more validity to my research, as I knew that a major

organisation wanted to buy into it and that it had a real tangible result in mind. Of course, it meant I had to write reports for the sponsor as well as the dissertation. The time to design, word process and present the dissertation is also costly and time-consuming and needs to be carried out professionally, and this should be taken account of in planning.

Prospective EdD students will need to consider what time and space they can create both in their busy schedules, and in finding a place to study. Creating a study at home is almost a prerequisite. I estimated that each module (12 on the Bristol programme) took roughly 10 days of time (3 days attendance at the university and the remainder researching and writing). I started the dissertation a year into the course, and it took me two and a half years to complete to approval following the viva. I logged my time (keeping a diary log ensures you do not lose ideas, contacts, references which you ferret out or accidentally pick up and follow-ups) and estimate it took me the equivalent of 315 days. Inevitably, this time came from evenings and weekends and about half of my normal annual leave was spent writing. Rightly so, my employers still expected their full value out of me, and my working and studying week averaged about 60 hours; in some critical weeks, it went as high as 80 hours. This reflected my approach, however, which was to complete within three to three and a half years. Most EdDs offer an opportunity to spread the work over seven years.

The professional doctoral candidate therefore needs to juggle family, work and study and must develop coping strategies for how the degree work will affect their free time and impact on quality of life. Personal skills in time management and planning are essential if you are to stay sane.

Doctoral study can therefore be a lengthy process during which commitment and enthusiasm equally need to be sustained. The value of EdDs is that they bring people together who have a common interest in educational excellence and this can be capitalised upon to provide learning sets for mutual support. At Bristol, these have been arranged informally by the participants themselves and people keep in touch through fax, telephone and e-mail. Some groups continue to meet outside the three day workshops in Bristol, travelling between their members' institutions. It is important for all students to ensure they develop a personal network of some kind, for psychological and moral support; and to assist in overcoming the troughs as well as celebrating the peaks during the programme.

CHOOSING A PROGRAMME

Linked to this, there is a fourth suggestion to those thinking of EdD study as more institutions clamber on board the EdD market. At one level, the growing number of providers is a good thing because it will reduce travel and make provision more local. However, the quality of what is offered may differ from university to university. I suggest a number of criteria here to help in selection.

Firstly, examine the track record of faculty members. What is the department's research rating? What are the faculty publishing on? Is there a restrictive research paradigm in the department? Has the department been able to attract names you recognise as having published meaningful, practical or applied research? What are the completion rates of current and recent EdD or PhD students?

Secondly, pay a visit to the

department. What is its library and learning resource facility like? What is the policy on inter-library loans (you will need good access)? What facilities are dedicated to EdD students? If you have to travel, are residential accommodation organised and car parking available? Are meals provided? To what degree are EdD participants socialised to one another outside the formal environs of the classroom?

The department secretary or course administrator is a critical interface between you and the university organisation. Is the secretariat friendly, knowledgeable and likely to be supportive? All of these things matter, because they can be time-consuming and diverting from the real job of studying and discursive intercourse with other students and tutors. You need to use your time effectively, and know you can rely on the university to enhance this, rather than diminish it by not getting the housekeeping right. Most EdD providers are aware of this, and have a total quality approach to the provision - after all, you are worth £10,000 to them, as well as enhancing their research ratings.

Perhaps the most important advice, however, is to ensure that the right course is chosen because its character is appropriate. Phillida Salmon in her very useful book *Achieving a PhD*, (1992, Trentham Books) has described doctoral study in terms of authorship. Those planning to undertake the degree should be asking questions about the potential for transformative learning on the programme. A good EdD will be about what Salmon describes as *emancipation* and *empowerment* - process, not just product. To what extent will the programme be centered upon the expert investigation of applied fields in education? How far is the

research encouraged and grounded on the needs of participants themselves? To what extent is creative endeavor encouraged amongst existing EdD or PhD students in the department?

Similarly, the relationship between adviser-supervisor and candidate is critical to the students who are probably undertaking their first major piece of independent research. What is the university policy and the department's track record of practice in this regard? Talk to current students to find out if they are satisfied with the level of support. When on the programme, seek out tutors who interest you. Most will be interested in your work. Select your supervisor carefully. If one selects you because your work shows promise, and s/he has a good character and reputation, do not hesitate to adopt her or him as your adviser.

Before registering and committing yourself, try and obtain a feel for the department, and the personalities involved. Many programmes offer pathways in specialised areas. Make sure you can construct an appropriate one which will suit your needs based on what is on offer.

These are only a few of the questions you might want to obtain answers to, but they are perhaps some of the important ones if you are to obtain maximum satisfaction and achievement on the programme.

The new EdD degree is an exciting and welcome innovation which will encourage and promote a new generation of inspired and quality leaders in managing educational change in the UK. At a time when all professionals are being encouraged to engage in lifetime education, the degree offers a unique opportunity to generate new ideas, originality and conceptual insights in the delivery of education.

(Continued on page 22)

Books

Search for Your Inner Hero

Teaching Well and Liking It

edited by James L Bess

John Hopkins University Press (1997)

£33 ISBN 0-8018-5364-8

As a newcomer to teaching, as yet unadulterated by the political baggage that comes with time, I have been looking for a book like this. It attempts to ground discussions of teaching in the more relevant issue of 'motivation' as opposed to the rather distant and impersonal concepts of accountability, efficiency and the ever-present RAE which seem to dominate most contemporary debates within British higher education. The focal points of this book are the teacher as an individual and teaching as a human activity.

Set in a wider context, the book is also an articulate print expression of the powerful message in the song "*Search for A Hero*" by the pop group M People. The pulse of the book quietly connects with the popular model of the teacher whose inspiration transmogrifies lives, a model shaped as much as reinforced by movies such as *My Fair Lady*, *To Sir with Love*, *Dead Poets' Society*, *Dangerous Minds*, *Mr Holland's Opus* and more recently, *Matilda*. The best

(Continued from page 21)

Additionally, the participative nature of the EdD should help bring university schools of education closer to practitioners and institution leaders, and start to bridge the academic-practice divide.

Dr Gregory is at University College Suffolk, University of East Anglia.

teachers are arguably those who have a touch of ethics, vision and inspiration to them - in short, those who are visibly 'motivated' to teach.

The book devotes its 21 chapters to unravelling the modern conundrums of teaching from nicely-argued perspectives such as the feminist viewpoint (by Judith Glazer); the self-determination model (by Edward Deci) and the analysis of the implications of technology (by Diane Dunlap). It rightly argues that teaching requires not only an individual response but also an institutional one, by way of structures, incentives and ethics, if it is to be systematically uplifted. In short, teaching has to be seen as another equally valid route to academic power. Britain could be taking a symbolic step towards this ideal if the Dearing Inquiry decides to adopt a proposal by the Institute of Education to introduce a national professional accreditation system for university teachers (see THES, 27 Feb 1997).

It is worth noting that this book has a US orientation, with all its essays except that by Martin Trow visibly located within the American system. It is perhaps doubtful whether there could be a British counterpart. Unlike their British cousins, American scholars often seem most at ease connecting theoretical dots which others are slow to see, in this case, on education, but perhaps on other turfs as well. This present book of essays is an essential read for those who are keen to put articulate flesh on their skeletal interest in teaching.

Irene Loh

University of Hull

Learn to Teach How to Learn

Teaching for Learning at University

Denise Chalmers & Richard Fuller

Kogan Page (1996) £18.99

ISBN 0 7494 2041 3

I was fortunate enough to meet Denise Chalmers and Richard Fuller at a recent conference, and was so impressed with their ideas on helping students to learn that I went out and bought this book!

It should help address one of the ironies of HE: that many of the people who teach in it were, as students, some of the best, most able of learners. As students, today's teachers probably used a range of learning strategies, but were not necessarily aware of what they were doing or why it was appropriate. Consequently as teachers in HE we rapidly come to realise that not all students are 'good learners'; but we may not know what to do to help them.

One of the key issues raised in Chalmers' and Fuller's book is that learning to learn is most effectively done while learning your chosen discipline. This book should provide teachers in HE with a range of approaches to enhance their students' learning within their disciplines. The book contains plenty of practical 'how to do it' advice, with some reference to learning theory. The book also includes case studies to illustrate where the techniques have been put into practice, though I felt that these added little to the text.

This book should be useful to any teacher in HE who wishes to enhance their students' learning abilities. They may even pick up some tips to enhance

their own! It would be of particular value to newer members of staff who are trying to develop their teaching skills. It could also be useful to many students - although, once they realise that there are some things that teachers can do to enhance student learning, they may be somewhat dissatisfied with those teachers who seem not to know this.

In summary, a book which can be used to help teachers learn to teach learning how to learn - useful!

Graham Clarke

University of Wales Bangor

TECHNO RAVE

Technology in Teaching and Learning: A Guide for Academics

Barnett L, Brunner D, Maier, P. & Warren, A.

Interactive Learning Centre,
University of Southampton (1996)
£35.00 ISBN 0 85432 586 7

This is a timely resource which aims to help academics to understand and consider integrating new technologies into teaching and learning in the context which we know all too well - increased student numbers and diversity, and decreased resources. Funded under the TLTP project, its price is therefore subsidised.

It is best to start by viewing the 16-minute video, which uses a mixture of academics (female and male) from various departments offering brief case studies of their own work in this field, plus clear voice-over explanations and chart summaries. The video explores advantages of and issues raised by four different forms of technology-supported learning:

♦ CBL: Computer-Based Learning for teaching facts, structures or procedures

♦ RBL: Resource-Based Learning for more flexible, research-style learning

♦ C o m p u t e r - M e d i a t e d Communication for distance learning and collaborative interactions between tutor and students and amongst students

♦ WWW: World-Wide Web, combining the advantages of all the previous methods in 24-hour anywhere access to anything!!

The staff featured on the video all emphasise the needs for clarity of purpose in incorporating technology, for investment of time and energy in initial development stages and, crucially, for infrastructure support. The video is a clear, simple resource which covers a lot of ground in a short space of time.

Book 1, with its focus on *Technology*, may be a turn-off for many - the early pages encourage self-assessment of your technical skills using quaint pencil icons for scale rating answers or tick lists, including 'Use a mouse'. They probably didn't want to exclude anybody - which is admirable - but it's hard to get excited about this.

Put *Book 1* aside until/unless you have a definite query, and then use the comprehensive Contents listings to find your answers (no Index). Themes covered include using your own computer and networks, the Internet and Web, and electronic communications including email, Usenet, and Conferencing. You will never need the intricacies of much technical information here - functions provided for academics by Computer Support staff. However, it's useful to have a handy reference guide for all those abbreviations we come across so often (ftp, gopher, archie and all). One concern in such a fast-moving field is how long it will take before such a

source becomes misleadingly out of date.

Book 2, Teaching and Learning, is a better choice after the video, since it is concerned with exploring and evaluating your own approaches to teaching and learning, and the potential benefits of integrating technology to enhance the quality of your educational provision. Chapters 1 and 2 would be particularly helpful for individual staff new to HE. Although it seems to be aimed at academics as individuals, I can't see many more experienced staff working through such material alone. However, it could be useful to adapt for team or departmental development events.

I have to say that there is little in this which is new, but it is presented clearly with internal cross-references, and wider references at the end of each chapter to further reading. Case studies are also included with reference contact points.

The second half of the book picks up the four complementary technologies outlined in the video, and takes you through stages such as planning learning packages involving use of technology, identifying constraints or advantages, effort-rating for use of the WWW, and managing electronic communications.

Overall, this is a clear overview for beginners, and a useful reference resource for staff who have already begun to learn more about technology and to incorporate it into their own practice. People will probably still turn to specialist associations or groupings for case study experiences directly relevant to their area of work. Computer boffins will not find much to interest them, unless they are responsible for staff development in technology in teaching and learning, and want to remember the stages involved in 'learning to walk or surf!'

Chris Newman

University of Derby

Clever assessments add up to teaching success

53 Ways to Ask Questions in Mathematics and Statistics

Ruth Hubbard

Technical and Educational Services
(1995), £10.00 ISBN 0 94788562 5

It seems sad, but undeniably true, that many teachers and students of mathematics believe that mathematics is learned through the successful completion of standard exercises. To most people in education, it must seem like common sense that assessments should cause students to reflect on their work if they are to learn from them. Standard exercises really don't fit the bill! I have come to expect just such common sense from books in the '53' series of texts, which are aimed at teachers from tertiary to higher education. I was not disappointed by this recent addition.

The book begins by identifying standard types of questions in mathematics, and then proceeds to offer useful assessment strategies. While the suggestions made are mostly well established, the sectioning of points is fresh, helpful and surprisingly unlike the arrangement in other '53' books. Rather than categorising activities and approaches that the reader may adopt, the author arranges points in terms of the pitfalls of question setting. Headings such as "Questions which address students' problems" and "Questions which address teachers' problems" make clear that the author wishes readers to follow an argument intended to inform their approach in assessing students, rather than just offer a set of activities. This more traditionally academic approach is backed up by an annotated bibliography.

Many of the assessment strategies

offered in the book are designed specifically to allow teachers to identify student misconceptions and gaps in understanding. The author provides example questions that are cleverly worded to help students to confront their own misconceptions, use mathematical notation correctly, and reflect on their own work. A number of suggestions for using technology well in mathematics teaching are also explained.

Despite the many good points, I have a couple of quibbles. Although references and a bibliography are provided, texts are seldom cited. Also, an index would have helped in relocating specific suggestions, particularly given the way suggestions are arranged. Overall though, the approach taken in identifying the difficulties in assessing students' work makes this book a highly interesting and useful read for any teacher of mathematics.

Paul Roach

University of Glamorgan

A solution to all your chemical problems?

Essential Chemistry for Advanced Biologists

Geoff Weston

Technical and Education Services
(1996) £14.00 pb ISBN 0-947885-323

It is an unfortunate fact of life that biology students often hate chemistry. The reasons are many and varied but often include the perceived complexity and lack of relevance of the subject. *Essential Chemistry for Advanced Biologists* is a well designed text that may redress the balance. It appears to be designed with students in mind, with

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wide margins to allow additional notes or rough work and well chosen biological examples to keep the attention of even the most chemistry-fearing biologist. Pre-A level material is included which avoids the presumption of prior knowledge, provides a familiar start point and forms a complete text for student reference.

The book is broken into thirteen short chapters ranging from atomic structure through concentrations, conversions and calculations to hydrophobic chemical bonds. Each chapter provides key facts, good clear diagrams where appropriate, and illustrative examples chosen to show the relevance of the information to biological systems. At the end of each chapter is a number, varying between six and eighteen, of self-help questions that allow students to establish and confirm their understanding of each chapter. In particular, the section on concentrations was very clearly written, providing good clear examples of calculations and conversions. If I have to criticise the book, and it is with my arm twisted behind my back, it would be that some of the biological concepts are simplified a little too much e.g. membrane structure.

If you teach biologists who struggle with fundamental chemistry and chemical principles, have a look. It may just solve your problems.

David Revitt

Staffordshire University

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