

New Academic

The Magazine of Teaching and Learning in Higher Education Summer 1996 • Vol. 5 No. 2



How Much Do Students Think They Know?

Also: Skills Employers Want
Oral Assessment in Groups
Student Assignments as Tutor's Research

SEDA

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Information for Contributors

The Editor welcomes all material which might be of interest to teachers in higher education: the purpose of *The New Academic* is to promote good practice in teaching and better understanding of the processes involved in learning in all areas of higher education.

Audience is drawn from educators in all fields and disciplines. You should therefore not assume specialised knowledge, but write clear, straightforward accounts in plain English. When describing projects, please give concrete detail. Papers accepted for publication may be subject to editing.

All material should be submitted in three copies, typewritten on single side of A4, double-spaced. Submission of a paper to *The New Academic* implies that it has not been published elsewhere and that it is not currently being considered for publication by any other editor or publisher.

Everyone involved with *The New Academic* works on it only part of the time, and so delays in dealing with submissions are inevitable. All papers will be reviewed by at least two people, and expert advice sought where appropriate. If you wish prompt acknowledgement, please enclose stamped addressed envelope. Return postage is essential if you wish your script to be returned if not accepted. To speed production, the Editor would appreciate receiving finalised material on floppy disc in text only, all formatting removed.

Articles

These should be between 800 and 2000 words. References should be kept to a minimum: where necessary, author's name should be given with date in brackets in text, for example Thatcher (1992). Reference list should be in alphabetical order, in standard academic style: e.g.

Thatcher, M. (1992). How I turned back the tide,
Journal of Marine Studies, 14, 123-45.

Thatcher, M. (1992). **Lessons for Canute**. Portsmouth:
Celebrity Press.

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Book reviews

All material to be sent to Book Reviews Editor, who will give guidance: 200 to 400 words. For presentation, please see Books section.

Conference reports

Reports on all conferences of relevance to teachers in higher education are welcome: 200 to 500 words, with concrete detail of interesting papers given. For style of presentation, please see Reports section.

News

Events, decisions, discoveries, people: items of interest to teachers in higher education should be sent to the Editor. Notional deadlines: Spring, 15 January; Summer, 14 April; Autumn, 15 September.

Acronyms used in *The New Academic*

- APEL Accreditation of Prior Experiential Learning
- BTEC Business and Technical Education Council
- CAT Credit Accumulation and Transfer
- FSEDA Fellow of SEDA
- HE Higher Education
- HEFC Higher Education Funding Council
- HEFCE Higher Education Funding Council of England
- 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

The list will be added to as appropriate.

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the New Academic

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Helping Our Students

The theme for this summer issue is students... helping them, examining them, teaching them. And the articles that we offer are as varied as the students themselves.

How much students know – or perhaps how little – when they start their HE course exercises the mind of many a teacher and lecturer. *Geoff Walker* (page 5) describes how he took the bull by the horns and asked his students how much they knew about a set of key concepts in his subject (chemical engineering). The results were illuminating and helpful to all teachers in the department. Teachers in many other fields should find inspiration here.

Simon Polovina (page 3) has found that good planning can help both students and staff. He gets his students to do his journal research for him, and they benefit from a meaningful assignment and learning by doing. I was a bit doubtful about this approach, but no. It has its enthusiastic supporters, and Dr Polovina has even produced a model to describe the elements needed to ensure all parties benefit.

CAREERS AND THE EMPLOYER

Developing the skills that employers want is a theme that crops up everywhere these days. *Grete Birtwistle* (page 10) explains how Glasgow Caledonian University linked up with local industry to develop the kind of degree course that would help students acquire the kind of skills that would be truly useful in their future careers. Of the students pictured on page 11, one is now taking her Masters Degree in Entrepreneurial Studies, another a Law Degree by conversion, and the others have found work with major retailers.

At the other end of our offshore island, Portsmouth University's Careers Service has developed an active programme of career development for all its students. *Ian Cross* (page 8) describes how this works for his students in civil engineering. Not all students attend the structured course, but those who do are enthusiastic.

MORE ON ASSESSMENT

Assessment is a topic that we must continually examine. This time *Pat Grant* takes a fresh look at the oral, and describes how oral assessment can be conducted in small groups. She suggests that this is an important and essential approach to assessing teachers in particular, but believes that very special skills are required.

TIPS ON TEACHING

Creating good teachers is an underlying theme in everything we publish. Here *Reg Dennick* gives us a flavour of an intensive

two-day workshop on improving teaching. Originally designed for teachers of medicine – a topic that was so focussed on the facts that medical instructors had little time even to consider HOW they should convey them to their students – this course has been adapted to the needs of teachers in a wide variety of topic areas.

A NEW FORUM

This Summer sees the creation of a new section: **Forum**. This replaces the usual Letters page, and is designed to offer the opportunity for contributors to debate issues at greater length. Articles may be up to a maximum of 800 words on a topic of interest to all readers of *The New Academic*. Publication cannot be guaranteed, and final decision rests with the Editor.

Our first contribution comes from *Mike Hayes*: he comments on a paper by Alan Saunders published last summer, entitled "The Lost Subject and Curricular Drift."

The professionalism of teachers in HE continues to be a preoccupation. Many readers will know that the Association of University Teachers has now proposed that a professional qualification for HE teachers be considered. We continue this debate. *John Radford* explains how members of the British Psychological Society have approached this need for a nationally recognised professional qualification, and *Liz Beaty* reiterates SEDA's commitment to the Accreditation of Teachers in HE. Her contribution is an edited extract from the formal reply sent on behalf of SEDA to the Executive of AUT, following publication of their discussion paper. This must be an issue of great consequence to many of our readers, and we welcome further contributions to the debate.

GETTING THE WORD ABOUT

Readers of *The New Academic* are now to be found world-wide, and we have had requests for permission to reprint articles from as far away as Hong Kong and Australia. We are



Elizabeth Mapstone, Editor

always delighted to hear of publications which wish to use our articles, and create no problems about granting permission. Please see the information about Copyright on this page. A reasonable fee is charged to third parties who want to use the articles commercially, but in general, academic institutions wishing to distribute information in their newsletters are simply asked to note the prior publication.

Sometimes information is copied without permission, and we have come across some interesting examples. The most striking was discovered by Ivan Moore, Chair of the Editorial Board, when he attended an HEFC conference last term. Somehow he had not yet seen his Spring 1996 issue, as he had been travelling, and suddenly found himself confronted with a photocopy of page 8 of an issue he did not even know was out. It was clearly labelled as coming from *The New Academic*, and with the date, so we are not objecting! This page – a table of Proposed Criteria for Marking Written Assignments, created by Mic Morgan, Jenny Spouse and Chris Rust of Oxford Brookes University – has been one of our most popular ever. They deserve full credit for their practical proposals, so if you have been using this table, do please acknowledge its creators!

We have even been the subject of review – in *ExChanges*, the Newsletter of Learning and Teaching at the University of North London, no.1. Reviewer Cathy May wrote: "The *New Academic* is an interesting, lively and varied magazine for teachers in HE." Thank you, Cathy.

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Student Assignments as Tutor's Research

Are you able to keep up with the literature in your field? Few of us, alas, find we have the time to read all the journals or edited books that would keep us ahead of the game. But *Simon Polovina* has a solution: get your students to do your literature search for you. They will benefit – and so will you. Indeed, he is so enthusiastic about this as a productive method for assessing students for their benefit as well as his own, he has come up with a theoretical model to describe the elements needed: the *Synergistic Assessment Model*, or *SAM*.

Given the present educational climate of limited time and monetary resources we, as tutors, are finding it increasingly difficult to assess our students adequately. As we are all painfully aware, traditional student essays do not contribute to the student's experience of real research or real work, and simple reproduction of the tutor's lectures does not facilitate deep learning.

At the same time, we are subject to conflicting pressures in our own work. In many fields, such as computing, where the base of knowledge is changing with increasing rapidity, the tutor is faced with a struggle just to keep up to date. Added to this task, there is academic pressure for lecturers in HE to conduct leading-edge research. Can the limited resources be maximised by conducting assignments that will assess students' capabilities, whilst increasing both their own and their tutor's knowledge?

THE SYNERGISTIC ASSESSMENT MODEL, 'SAM'

To capture the synergy that the above question seeks, the students would need to be set relevant tasks that ultimately support the lecturer's research. Clearly these assessed tasks require that the students explore new avenues whose outcomes are of interest to the lecturer, hence the students would be motivated by the lecturer towards real experiences and deep learning.

Of course the above proposal might encounter certain obstacles. For instance the new approach is likely to make marking more difficult as comparisons with suggested answers are clearly less possible. Pre-declared learning outcomes and marking schemes would accordingly have to be devised that need to reflect this added dynamic dimension. This may be more difficult to achieve, though experiences from 'final year' projects that students usually undertake in HE, may be of help in overcoming such limitations, given

these projects do tend to examine areas new to the tutor. Indeed the 'synergistic assessment model', or 'SAM' for short, proposed in this discussion might be viewed as an elaboration of those specialist projects into the mainstream of assessment activity.

A SIMPLE EXPERIMENT

To help ascertain how SAM might work in practice, an initial experiment was devised and conducted with thirteen second year part-time students on South Bank University's HNC (Higher National Certificate) in Business Information Technology (BIT), run within the School of Computing, Information Systems and Mathematics. The particular course unit was 'Financial Control and Decision Making' (FC & DM) on which I had just taken over as the tutor, hence I was directly involved with not only in the experiment's design but its actual conduct. Consequentially this article discusses my impressions and reflections from trying SAM directly.

By way of background, the FC & DM unit had already existed for some years, and would run for four hours a week from late September 1994 to January 1995. A colleague had passed me some lecture notes on 'the motivational effects of budgets', a part of the unit. Due to teaching pressures these particular notes, though comprehensive, were becoming increasingly out of date as the years progressed. Furthermore the nature of this subject did not lend itself to a straightforward bringing up to date by reference to, say, a text book. "The motivational effects of budgets" was therefore a worthy candidate for a SAM experiment.

Assessment on the FC & DM unit consisted of three assignments and a two-hour examination. The first assignment, as in prior years, essentially followed the usual traditional format. Assignments 2 and 3, however, were replaced with the following SAM-style tasks:



Simon Polovina

You have just set up as an Accounting Information Systems Consultant. Recognising a gap in the market, you intend to improve your clients' knowledge about budgeting, especially its motivational aspects. You happen to mention this area to your friend, a practising accountant. The next day this friend, as a favour, hands you the notes she took when she was an accounting student some years ago. These notes, entitled "THE MOTIVATIONAL EFFECTS OF BUDGETS", are fully reproduced below. On reading the notes, you decide they need adapting to your needs.

Required (Assignment 2):

You believe these notes are probably out of date. Therefore, by recourse to the library or other facilities, find out how relevant these notes are for today's businesses. Update the notes accordingly, and present your results in a concise report for your clients. Cite your sources.

Required (Assignment 3):

Now that you have completed the above report outlining your general findings, produce a second concise report that indicates how these general findings might apply to your client's information systems strategy. Besides citing your sources you may, should you wish, cross-reference your second report to the first.

Assignment 2 embodied the above discussed updating exercise, whilst the third took a more adventurous twist. Here the students were required to bring together two apparently unrelated areas, an inherently difficult task because even I, as the tutor, was not certain that studies existed in this area although it was worthy of research. The students were not aware they were involved in a SAM experiment, nor did I research the assignment areas beforehand, as the outcome of the experiment might have been prejudiced. The assignments were given out together, with number 2 due in four weeks. Number 3 was due after a further six weeks, although this included the Christmas and New Year holiday periods.

INITIAL STUDENT REACTION

Not surprisingly, the students became anxious about the requirement as, given the above constraints, no clear direction about the assignment content could be given. Instead the students were instructed in general journal and book reading skills and they also attended a one-hour study skills session by an expert from the University's Library Staff. Furthermore, the students were asked to reason from their own insight and views where they found the literature to be weak. Recognition was given to the fact that they had a limited time to complete the assignments, although this would not apply to bad presentation in their reports. A demonstration of their study skills, such as in citing references, was also stated as important. On later reflection, it became apparent that the students' concerns arose primarily from them not being able to elicit, even indirectly, the answer content from the tutor on these occasions. Thus deep learning techniques were indeed being endowed upon the students, even from the tutor's subconscious level!

EXPERIMENTAL OUTCOMES

Assignment 2

Assignment 2 was handed in, marked by me, and returned to the students within a week. This ensured they had adequate time to reflect upon their first results, and adapt their approach for Assignment 3. Overall, the standard of the work was high: Six of the thirteen scripts scored more than seventy percent; the remainder ranged between sixty-eight and fifty percent. One jubilant student typified the overall view of the group when he commented about how pleased he was to get so much out of the exercise whereas I, the tutor, had obtained a potentially up-to-date set of lecture material.

The cautionary term 'potentially' above, however, highlighted certain problems with the SAM approach. I noticed that some scripts appeared disjointed, indicating plagiarism through sections of other authors'

works being simply stuck together. I also checked the (sometimes inadequate) sources given in the students' scripts to ensure I would not be subsequently teaching erroneous material. Where I was unable to find a source in time, however, I simply gave credit to the individual student. After all, I always have the option of updating my knowledge, by following up on these sources later as I wished.

Overall, I was satisfied that the sources were found to be accurate although I also confirmed plagiarism in some of the suspected scripts. Consequentially, whilst praising the group on their efforts, I warned them that plagiarism would not be tolerated. Despite such difficulties it was evident that SAM was far more resource effective in updating the tutor's knowledge than could be expected with the traditional 'teacher finds out first and the student then regurgitates' approach to assessment.

Assignment 3

As regards Assignment 3, despite its added difficulty, which was reflected in the marking, the task was handled well by most of the students. Again six of the thirteen scripts scored more than seventy percent; two of these had obtained less than seventy the previous time. The remaining scripts, except two, achieved between sixty-eight and fifty-six percent; these two are discussed in a moment. It was clear that the students had, besides fulfilling their learning aims as before, benefited from their experiences with Assignment 2. Some had greatly added value from their previous effort, and had produced imaginative and well-presented reports. In addition to my having updated material, I became aware of new concepts about the interrelationship between Information Systems Strategy (ISS) and Budget Motivation (BM). This material would thus be useful for both my teaching and research.

On the 'housekeeping' front, the references of Assignment 3 were more properly cited and plagiarism was thankfully not in evidence. One or two students, however, wrote about BM and ISS, but did not relate the two. Of the two 'below fifty percent' scripts, one obtained forty-three percent. For some reason, this student had submitted only part of her assignment so potentially could have achieved much more. The other, marked at thirty-nine percent, had essentially missed the whole purpose of the exercise and simply discussed how spreadsheets worked. It is assumed that this isolated case is within tolerable experimental limits, although still a personal disappointment in terms of my teaching ability.

SUBSEQUENT USES

Since the above experiment, I have included a SAM-based assignment in the "Artificial

Intelligence for Business Applications" unit that I taught from February to July 1995, on the second year full-time HND (Higher National Diploma) BIT course. Once more I was pleased to obtain similarly positive results. I also took this instance along a further dimension by re-testing, again with success, the students' findings in the unit's examination paper.

I have also since re-run the above BM and ISS assignments, with certain modifications, with students attending the FC & DM unit of the second year HNC BIT course, from September 1995 to January 1996. A colleague of mine undertook the same modified assignments on the parallel full-time FC & DM unit of the second year HND BIT course during the same period. The modifications meant that the students were now also given a representative sample of the previous year's students submitted reports, so the current year could take the previous year's studies and build upon them, which they successfully did in both the HNC and HND streams. Their referencing to sources was excellent; indeed other lecturers to whom I showed the students' reports commented that the reports were akin to postgraduate standard.

CONCLUDING REMARKS

From the events above, there is little doubt that the student's real experiences and deep learning were facilitated by the SAM approach. SAM thus supports the ideals of assessments identified by Boud (1991) and Gibbs (1992). SAM also augments some of the assessment techniques discussed by Race (1995, 1996). On top of these benefits, the tutor's own teaching and research knowledge was extended. Of course this article does not claim to have conducted a rigorous study of SAM, and is it not claimed that SAM, so far, is a comprehensive methodology. Indeed it may not even be truly novel. Nonetheless this discussion indicates that the SAM idea is worthy of further investigation, and it is a technique that I, for one, will pursue with alacrity.

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What Students Think They Know

Have you ever asked your students what they think they know about your subject? *Geoff Walker* got fed up with bemoaning his students' lack of knowledge, and decided to investigate. Here he explains how he developed a prior knowledge questionnaire for his students in chemical engineering, and the positive response from teaching staff to the information acquired. Teachers in other fields are sure to find inspiration here.

How often have you heard the complaint over coffee in the staff club "When I asked Year 1 about X no one claimed to have ever heard of it"? We all bemoan our students' lack of knowledge of principles or concepts we are sure they have been taught, but how often do we do anything about it? Perhaps we should be less surprised than we are. I am sure, if we are honest with ourselves, we are aware that we had only an imperfect understanding of many of the key concepts of our discipline when we graduated. Certainly, when I first came into academic life after several years away from Chemical Engineering, I often found myself thinking "So that's what that was about" when having to teach a topic I had not looked at since finishing my degree. Over those first few years in lecturing, I became very aware of just how much I did not really understand properly, and it was only when faced

with having to explain it to others that I really came to grips with many concepts. Is it any surprise then that many of our students have only an imperfect understanding of, and in some cases, downright misconceptions about many important principles? It should be even less surprising if we consider that research has demonstrated that students very rapidly forget most of what they learnt for their exams. As one author put it

"... research indicates that, at least for a short period, students retain vast quantities of information. On the other hand, many of them soon seem to forget much of it ..."

(Ramsden, 1992)

About three years ago, it was becoming apparent that all was not well with the mathematical abilities of students entering our

courses. I undertook a small scale investigation, under the auspices of the Enterprise in Higher Education project, into staff perceptions of the mathematical abilities of new students and the mathematical requirements of a range of science and engineering degrees in the University. This study preceded the published work in the same area by the Engineering Council (Sutherland & Pozzi 1995), but came to much the same conclusions, namely that there was a perceived decline in the mathematical knowledge and abilities of students entering degree courses in engineering. While undertaking this study, I became aware that this weakness often extends to the students' understanding of the basic scientific laws and principles on which much first year work is based.

If we are going to teach our students effectively, it is important that we are aware of

where they start from, what their prior knowledge is. After all, students do not enter University as blank sheets of paper which are ready to be written on. They come in with a range of prior knowledge, some with more than others, but all of them with a different range of understandings, however imperfect, of the subjects they have studied previously and we need to access that prior knowledge.

One way to do this is to give the students a test on entry to determine what they know about the key areas on which the course depends. This was certainly a principle advocated when I did my teacher training in the early 1970's. I have always been reluctant to do this. Students are going to be faced with enough tests and exams during their time with us without confronting them with one almost before they have got through the door. While some may not have my reservations, all I can say is that I saw the effect the insensitive use of a Maths pre-test had on my daughter in her first day in secondary school.

An alternative approach is to use a questionnaire. A questionnaire has the advantage that it can be devised to be less threatening to the students, yet can give useful information.

THE PRIOR KNOWLEDGE QUESTIONNAIRE

The prior knowledge questionnaire developed here is based on an idea which has been used by some academics in the United States (Angelo, 1995). The idea is very simple: namely the students are asked what they think is their understanding of a topic, principle or problem using a multiple choice format. In the particular case discussed here, the questionnaire was developed by identifying the major themes and topics to be found in various A-level syllabuses in Physics and Chemistry, using some of the excellent revision guides that are available (Breithaupt & Dunn, 1988, McDuell, 1988). These often have an analysis of the syllabi of the various GCE boards, so it is possible to identify the common topics across the various boards. This was then used to provide an initial list of terms representing scientific laws, principles and concepts. The list was discussed with staff teaching first year students to identify the items which they felt to be essential items of knowledge for the first year of a Chemical Engineering course. This resulted in a final list of 66 items which formed the questionnaire. The students were given four alternative responses for each item (see box).

Key to questionnaire answers

- A. I have never heard of this
- B. I have heard of this but do not know what it means
- C. I have some idea of what this means
- D. I know this and could explain it to someone else

Table 1. Items with the highest mean scores

ITEM	A	B	C	D
1 Length	1	2	3	28
2 Mass	0	2	8	24
3 Volume	1	1	8	23
4 Area	2	2	4	27
5 Balancing Chemical Equations	2	1	7	25
6 Velocity	1	2	9	23
7 Temperature	1	0	14	20
8 Weight	1	3	8	22
9 Force	1	1	13	20
10 Kinetic Energy	1	2	11	20
11 Potential Energy	0	3	12	19
12 Density	1	2	12	20
13 The Mole	1	2	12	20
14 Energy	1	3	11	20
15 Heat	1	1	15	18
16 Acceleration	2	3	10	20
17 Pressure	1	2	15	17
18 Work	0	4	14	17
19 Conservation of energy	0	6	12	17
20 Power	1	1	19	13

Table 2. Items with the lowest mean scores

ITEM	A	B	C	D
46 Boyle's law	1	15	10	9
47 Rate constant (of a chemical reaction)	1	13	14	7
48 Angular velocity	5	7	15	8
49 Moment of a force	3	12	10	9
50 Latent Heat	4	10	13	8
51 Resultant of forces/vectors	5	10	12	8
52 Charles's law	3	14	11	7
53 Resolution of a force/vector	8	10	8	8
54 Torque	8	7	16	4
55 Internal Energy	6	18	6	5
56 Dalton's law	10	10	11	4
57 Archimedes Principle	10	13	7	5
58 Moment of inertia	7	17	8	3
59 Torsion	10	12	11	1
60 Shear	13	8	11	2
61 Mass Fraction (in a mixture)	11	14	6	3
62 Interfacial (Surface) Tension	12	15	6	2
63 Law of mass action	15	12	5	3
64 Pressure Energy	15	13	5	2
65 Newton's Law of cooling	19	7	9	0
66 Radius of gyration	28	5	1	0

Table 3. Sign test on mean scores, HND vs Degree

	No. items	
Degree score > HND score	34	
HND Score > Degree score	28	(=T)
Ties	4	
Total	66	
at 5% level critical value, S =	24	(n= 62)
T > S, so not significant at 5% level		

The preamble, as well as explaining how to respond to the questionnaire, stressed that the students should use the feedback from the questionnaire to identify areas where they needed to do some preliminary work to help them to cope better with the course.

The questionnaire was administered to all first year Chemical Engineering Students during their induction week (we run both a degree and an HND). After processing the results, the response sheets were returned to the students and the results were circulated among the staff.

RESULTS

The questionnaire was administered to the students in a scheduled session during their induction week. A total of 35 sets of responses were received; 21 from BEng 1 and 14 from HND 1, from a possible 22 BEng 1 and 16 HND 1 students, a response rate of 92%. The results were processed by counting the numbers responding to each of the four possible responses using an optical mark reader. The data thus generated was used to compile a mean score for each item by allocating a value to each of the responses A to D on the basis A=1, B=2, C=3 & D=4. Null responses to any item were excluded from the mean score. The mean score could then be used to rank the items. This enables a picture to be built up of those items the students feel confident about and those about which they feel less confident. The twenty items with the highest mean scores are shown in Table 1 and the twenty with the lowest mean scores are shown in Table 2.

Looking at the items in Table 1, they are mostly concepts which one might expect students to have some familiarity with at GCSE level. There is a steady fall in the number of D responses with a corresponding rise in the number of C's. The total of C plus D responses, however, remains relatively constant at around 30 with only item 19 falling below a C+D total of 30. One curious feature in this group of items is that there are some A responses to the bulk of the items. The only explanation I can think of is that someone has misread the instructions and has responded the "wrong way round". I have no evidence to support this, however, and it is pure conjecture. Overall, the items at the top

of the list are not unexpected and clearly the overwhelming majority of this sample of students feel they have at least some knowledge of these concepts.

The items at the bottom of the list make an interesting comparison. They are all items which one would not normally expect students to have met before commencing A-level. The steady increase in the number of A responses should be noted. Increasing numbers of students are saying they have not heard of these concepts at all.

A comparison was made between the responses of the HND and the degree students. It was postulated that, since the HND has a lower entry requirement (one A-level or passes rather than merits at BTEC National level) than for the degree, these students might be expected to feel they have less knowledge than degree students and therefore their mean scores would tend to be lower than those of the degree students. To test this, a sign test was carried out on the mean scores of the two groups. The results are listed in table 3.

As can be seen, the difference between the two groups is not statistically significant. I can think of two possible explanations for this apparently anomalous result. The first is that there is a difference between the students' perceptions of their prior knowledge and their actual knowledge and as this questionnaire is asking for the students' own perceptions of their knowledge, both groups may feel equally confident about what they know even though, in some cases, that confidence is misplaced. The second explanation is that there is considerable overlap between the degree and HND students' prior knowledge and this has given rise to the result above. Our experience with the two courses over the years indicates that the true explanation probably lies in a combination of the two. In general, HND 1 has a slightly higher failure rate than BEng 1. On the other hand, most of the students who are successful in HND 1 ultimately progress to degree studies and it has been found that their performance overall in the degree is indistinguishable from those students who entered the degree in the normal way, ie via BEng 1. In fact, in our most recent set of BEng 2 results, for semester 1 1995/96, five of the top ten students had started out in HND.

CONCLUDING REMARKS

A questionnaire like the one described here is useful in helping to build up a picture of the students' knowledge at the start of a course. It does not, however, tell us exactly what they know nor does it highlight any misconceptions the students may have. What it does do is to indicate how confident the students are about their knowledge in areas relevant to the course in question. On the other hand, if



substantial numbers of students are responding "Never heard of this" or "Have heard of this but not sure what it means" to an item, then we must assume they do not understand the concept in question and adapt our teaching accordingly. The results of the questionnaire brought an overall positive response from staff teaching first year Chemical Engineering students.

They felt that it had provided useful data which could be used to inform their teaching. I certainly feel that having the results from the questionnaire has helped me to focus my teaching more effectively.

The advantages of a questionnaire like the one described here is that it is relatively non-threatening to the students and it is flexible and adaptable. With appropriate selection of items, it is as applicable to final year students as it is to first year students and it is adaptable

to any subject area. Certainly, we feel that we would like to extend the one described here to include maths next year.

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Geoff Walker is a Lecturer in Chemical Engineering and Course Tutor for HND Chemical Engineering in the School of Science and Technology at the University of Teesside.

COMING SOON

Do Staff and Students See Eye to Eye? by Alex Harrop

Taking Students by Surprise by Paul Walker

Academic Iatrogenesis by Mike Hayes

The Art of Inspiring Students

This will be a major theme in forthcoming issues, and contributions are invited.

PLEASE SEE INFORMATION FOR CONTRIBUTORS

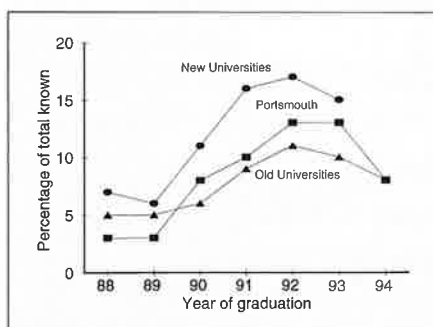
Careers and the Undergraduate

Increasingly, teachers in HE are coming to share their students' preoccupation with how academic training can prepare them for the world of work. *Ian Cross* tells us about a careers programme developed in his university, and describes how it works for his students of civil engineering.

Although the British economy may well be showing the 'green shoots' of recovery many new graduates will still find it difficult to secure their first employment for some time to come. They will also have to compete with a backlog of unemployed graduates although this percentage has fallen in recent years. (See the graph below.) During this time of restricted job opportunities students need to be able to demonstrate more than ever their academic and personal qualities effectively when applying for permanent employment, sponsorship or even temporary vacation work.

Many students are unaware of the need to identify and develop those personal qualities and attributes early on during their course in order to make themselves attractive and marketable to future employers at graduation. The lack of these qualities and/or an inability to market them often becomes painfully apparent, during a 'bad' interview experience or when rejected.

The Enterprise in Higher Education (EHE) Unit of the University of Portsmouth has recognised the importance of careers and as a strategic initiative funded the University's Personal and Career Development Project. The funding has allowed two careers advisers to work full time in producing what are known as **Active Tutorial Materials**. These cover various aspects of careers education which has been defined as 'curricular interventions designed to support students' career planning'. The materials take students through



Graduates believed to be unemployed as at 31 December.

the stages needed to make a good choice of career or any other self-fulfilling alternative. They allow students to work through the four main areas of careers education identified by Watts and Hawthorne which are as follows:

- **Self awareness**
Awareness of the distinctive characteristics (abilities, skills, values and interests) that define the kind of person one is and the kind of person one wishes to become.
- **Opportunity awareness**
Awareness of the possibilities that exist, the demands they make, and the rewards and satisfactions they can offer.
- **Decision Learning**
Acquisition of skills that will help one make career decisions in a manner more satisfactory to oneself.
- **Transition Learning**
Acquisition of skills that will help one implement career decisions and to cope with the transitions that ensue.

The Personal and Career Development Project has two basic premises:

- That personal and career development should be seen as a joint responsibility between teaching departments and the Careers Service.
- That personal and career development is best delivered by academic tutors as an integral part of a course or study pathway.

Naturally flowing out from these have been the two main objectives of the project which are as follows:

- The preparation and ongoing development of **Active Tutorial Materials** by careers advisors which enable academic tutors within departments to deliver careers education.
- The creation of assignments for the **Active Tutorial Material** which enable students skills and knowledge to be assessed. (The purpose of this is to allow departments to devise a syllabus for a credit-rated unit of study if they so wish.)

The **Active Tutorial Materials** have been written in such a way that academic tutors who have little or no expertise in careers education can deliver them effectively. Each session consists of a set of notes for tutors and worksheets for students which contain a mixture of individual but mostly group exercises.

For the Assessed Assignments, eight learning outcomes covering the four main areas of personal and career development have been identified. Seven assignments have been devised through which the relevant knowledge and competence can be developed and assessed. The criteria for assessment of the assignments and a marking scheme were developed in conjunction with both academic staff and employers.

Active Tutorial Materials for use by students which have been developed so far are as follows:

- Career Planning
- Making the most of employer contact
- Finding your own vacation work/industrial placements
- Creative job hunting
- Using career information resources
- The employment game

Each of these covers three one hour sessions. In addition a two session unit for tutors on the use of the PROSPECT_{HE} program has also been developed.

One impetus to integrating more careers education into programmes of study has come in the form of the HEFCE Teaching Quality Assessment exercise. The current Assessment Method examines careers information and guidance as one of the key features within Student Support and Guidance which is one of the 6 core aspects of provision by subject providers.

Traditionally the input from the University Careers Service to courses has been restricted to the early part of the final year in order to acquaint students with the opportunities offered by the Service, careers fairs, visits by employers and general advice on applications and interview techniques. Although this 'preparation' may have been sufficient at a

time of high demand for graduates the current period of restricted job opportunities has led to greater pressure on the Careers Service and a recognition that more needed to be done within courses and at an earlier stage.

The undergraduate career development programme described in the following section forms part of the Civil Engineering Department's strategy for careers education, guidance, and help with securing the first employment.

CIVIL ENGINEERING CAREER DEVELOPMENT PROGRAMME

Since 1992 the Department of Civil Engineering and the Careers Service have worked closely together to produce the following customised programme which develops over the duration of the undergraduate BEng/MEng Degree programme in civil engineering.

- Year 1** Finding your own vacation work/industrial placement.
- Year 2** Career planning and interview preparation.
- Final Year** The employment game.

This programme has been integrated into the curriculum via weekly timetabled non-academic tutorial periods. It is led and supervised by the Group Tutors who have been trained by the Careers Service in the delivery of the 'Active Tutorial' material. Each session is designed to last for about one hour. Students work through the material in small discussion sub-groups but with feedback to the whole group coordinated by the tutor. (The tutors also act as Personal Tutors to the students in their group.) In this way the material develops into a resource pack which students can draw upon at an appropriate time.

The following overview summarises the basic contents of the first, second and final year sessions which make up the programme.

First year material spans three sessions. Session one 'Getting the most out of vacation work' covers applying for work, advantages to the student and employer. Session two examines the ways of contacting employers (letter, telephone, personal approach) while session three helps the students to develop an on-going curriculum vitae. An optional session four develops telephone networking skills.

The second year focuses primarily on information. Session one helps the student to build a clearer picture of themselves via an interests profile, skills profile and working styles profile. Session two helps to identify the attributes (personal qualities) and aptitudes (abilities and skills) sought by employers. Session 3 concentrates on correctly completing a Standard Application Form (SAF). Session 4 develops the concept of networking to find contacts in order to obtain



Ian Cross and his students play the employment game.

job interviews. Session 5 introduces students to various interviewing skills.

The focus in the final year is on helping the student to understand the whole employment process **from the employers' perspective**. Session one explores the process of recruitment and selection by means of a board game. In session two small groups of students form a selection panel and analyse 'real' application forms in relation to specific employer requirements. Session three allows students to be the interviewer and interviewee. Session four allows more work to be done on producing an appropriate range of CVs tailored to specific job applications.

OBSERVATIONS AND COMMENT

Initially it was intended that all students would attend the sessions but in the event attendance varied during 1993-94; first year 78%, second year 51%, final year 58%. The Board of Studies discussed the problem and decided that for the 1994-95 academic year attendance should be optional because of a significant minority of mature students, students with industrial experience, UK and overseas sponsored students etc. The career development programme leader also made the stipulation that those attending should agree to attend all the sessions. In general students abided by this understanding. The potential BEng student attendance was; first year 72, second year 89, third year 66. Actual attendance as a percentage was: first year 85%, second year 33%, final year 36%. Clearly, when a programme like this is voluntary, one cannot expect all students to participate even though it is beneficial both in the short and long term. Interestingly some students said they did not join the programme because they wanted to use the time to meet coursework deadlines.

During 1995-96, which is the third consecutive year when the full programme has been run, some sessions have been grouped into half day blocks. This applies to second year sessions 1 and 2 (career planning) and

final year sessions 1, 2 and 3 (the employment game). In this way the time pressures resulting from students having long 'class contact' sessions before or after have been avoided and there has been a reduction in the number of occasions when sessions have been held. They have also been timetabled to avoid the published coursework deadlines. Group sizes of 24, as found to be optimal from experience, have been formed as far as possible. The students have liked these new arrangements resulting in increased participation.

In general student feedback on the value and benefits of the programme by means of questionnaires and personal discussion has been very positive, particularly so from final year students preparing for the 'milk round'.

One significant outcome of this programme, which has been brought on stream since 1992-93, has been greater student awareness of the facilities offered by the Careers Service particularly in the early years of the course. Many more civil engineering students now seek advice from the service than was previously the case and at an earlier stage.

The University of Portsmouth has a policy of integrating careers education into the curriculum, where it does not exist already, into current and planned programmes of study.

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Ian Cross is a Principal Lecturer in the Department of Civil Engineering at the University of Portsmouth. In implementing the career development programme for civil engineering undergraduates he has worked closely with Jean Tier and Cathy Monk of the University's Careers Service who developed the Active Tutorial Material.

Developing Skills Employers Want

Graduates today need more than a good degree if they are to get the job they hope for. *Grete Birtwistle* describes how her university has cooperated with industry to develop a practical degree course, which provides opportunities for students to acquire the kind of personal transferable skills employers want.

The concept of a 'job for life' is no longer viable and most people will have several jobs during their lifetime. The Department of Employment therefore suggests that education should provide everybody with a set of core and interpersonal skills suitable for an increasingly competitive labour market. Students need not only the best possible academic education but also the opportunity to develop their Personal Transferable Skills (PTS), defined as a set of social skills and behaviours that can be learned to help individuals interact with other people.

What do employers want?

A workshop, hosted by the University of North London in September 1995, identified the list of skills shown in the following box as those employers are looking for in graduates:

Skills employers want

Leadership skills
Ability to plan and organise
Assertiveness
Teamwork skills
Managing, adapting and coping with change.

However, they found that only a few students could provide evidence they had them.

What can students offer then?

The skills more prevalent in graduates are shown in a second box:

Skills graduates can offer

Analytical ability
Numerical skills including decision making
Business awareness
Verbal skills.

The workshop concluded that students should be made aware of employers' demands for all the skills listed in both boxes, and of the opportunities made available in HE to acquire them.



Louise Morrison, Nicola Hogg and Brenda Stevenson selling Christmas gifts.

WHAT WE ARE DOING TO HELP

In 1992, Glasgow Caledonian University developed a Degree in Consumer and Management Studies with the advice and help from industry representatives. These advisors recommended that degree courses should not only provide students with the knowledge and understanding of the techniques used in a range of business and management subjects, but should also offer students the opportunity to develop and practise personal and social skills. This meant that courses developed had to balance theory and practice in the curriculum to enable students to acquire appropriate abilities and skills directly transferable into industry as well as enhance their academic knowledge. The third year of the degree programme was therefore designed to include a special assignment: students would work in teams, have an opportunity to apply the theory they had learned and be able to practise a variety of skills.

One such example is the Retail Enterprise module which is part of the Retail Management Degree in the Department of Consumer Studies.

WHAT WE EXPECT

The learning outcomes for the Retail Enterprise module state that students completing the module should be able to:

- Plan a retail enterprise, based on market research
- Operate the enterprise, making an effective contribution in an appropriate managerial capacity
- Specify retail financial systems for the outlet
- Analyse and evaluate the performance of the retail enterprise after liquidation.
- Communicate effectively with appropriate external and internal bodies.

Students are expected to integrate other course subjects, such as Human Resource Management, Finance, Management Accounts, Marketing and Retail Operations, and to learn and develop the Personal Transferable Skills required by the retail industry.

HOW IT WORKS

An agreement was entered into with Young Enterprise Scotland (YES), which is a charitable

institution providing young people with the opportunity to develop their enterprise and interpersonal skills. Students learn from the experience of establishing a trading company with all its real problems, solutions and successes. YES supplies the relevant documentation for such an enterprise, a legal position in the tax system and a format for raising capital, operating and winding down the business. It was the first time that Young Enterprise had been associated with a university in Scotland, but their strategy is now to gain further contacts within the HE sector.

Industrial advisors were required to support and advise the students. The university were fortunate that good links were already established with industry and that companies such as Marks & Spencer, Body Shop and Burton Group all volunteered to provide advisers from senior members of their management teams.

LAUNCH OF TWO RETAIL OUTLETS

One of the important features of the module is that it is student-led. Students therefore split themselves into two companies, selected their own Board of Management, undertook market research, produced a business plan, raised share capital, operated the business, analysed the performance of the business etc. At each stage progress was monitored and feedback was available from university tutors or industrial advisers, but students retained free choice and the opportunity to fail or succeed in the business.

One group chose to sell Christmas gifts, books and posters whereas the other group sold merchandise with the University logo. Both groups were profitable and issued a good dividend to their shareholders.

ASSESSING THE WORK

Methods of assessments were complex. Students were not only assessed on the financial success of the enterprise, submissions of business plans and the Annual Report at the Annual General Meeting, but also on their presentation skills, their capacity to work to deadlines and their ability to contribute to the team. Formative and summative assessments were provided by appropriate self, peer, employer and tutor evaluations.

A CNAA (1991) questionnaire was adapted to measure students' perception of the skills and knowledge they had learnt and developed. For comparison purposes, students also completed the same questionnaire for another module, 'Working with People and Teams', where students also had an opportunity to integrate development of skills. Results were also compared with students' self and peer assessments.

The questionnaire contained 34 question in 11 sections. A score of zero was made if the



Yvonne Barron and Catherine McGugan selling university logo products.

statement was not relevant in the given situation; a score of one if the student felt s/he had learnt or developed the skill or knowledge a little bit; up to a score of four where the student perceived s/he had learnt or developed the skill or knowledge a great deal.

WHAT STUDENTS THINK

In all areas of personal and social skills, students perceived that they had learned or developed more from completing the 'Retail Enterprise' module than from an academic subject of equal weighting.

Students' perception of development in the area of 'conduct', i.e. standards of dress, hours of work, punctuality, company policies and procedures showed the highest significance. Real work is very different from university life and many students have great difficulty in making the transfer, but by simulating a workplace, students get opportunities they would not otherwise have had.

The second highest result was for the section concerning students' use of initiative, i.e. the degree of independent thinking, the reduced need for supervision and their ability to contribute towards the success of the project. The success of the retail enterprise outlets depended completely upon the students' team ideas and decisions. When, at the halfway stage, both businesses were forecasting to make a loss, it required great initiative by students to turn the businesses round.

Other skills being developed included making a commitment to the organisation; they found it necessary to accept responsibility to operate the enterprise within time scales and budgets. Self-motivation and

working with others were also seen as important and were perceived as having been practised. At times they found it very difficult to motivate the team and identified that problems arose from poor communication.

Students developed skills in writing reports, in sourcing and collating information and in being able to participate constructively in meetings. They had to plan and prioritise their own work effectively, meet deadlines agreed by the team and motivate themselves and others when problems occurred. The overall level of change for all skills developed was very high. This meant that those students who participated in the Retail Enterprise module perceived that they developed skills and knowledge, which will benefit them when they come to seek employment.

The Personal Transferable Skills learned and developed by students from student-led modules turn out to be far greater than from traditionally taught subjects. Students benefited not only from undertaking a small business venture, but also from the opportunity to add a number of personal skills, which will become a real selling point in a job interview. The enterprise has also resulted in a close relationship between employers, students and academics which will benefit all parties in the long term.

REFERENCE

CNAA (1991) Development of Placement and Assessment Procedures in Supervised Work Experience. CNAA Project Report 31.

Grete Birtwistle is with the Department of Consumer Studies in the Faculty of Business, Glasgow Caledonian University.

TIPS The Teaching Improvement Project System in Action

The cartoons accompanying this article are all metaphors for teaching and learning. Yes, you knew that! But which one is better? *Reg Dennick* explains how arguing about the relative merits of each metaphor is just the first step in an intensive workshop designed to help teachers improve their skills. Dr. Dennick is with the Medical School at Nottingham University, but the Teaching Improvement Project System - otherwise known as TIPS - sounds as though it could be useful to teachers in all fields.

It's 9 am on a Thursday morning and you are suddenly presented with a cartoon of a boy pouring petrol into the tank of a car while the girl driver sits at the wheel, grinning out of the window. This is shortly followed by drawings of a potter moulding clay, a guide and a traveller exploring some mountainous terrain and people working on a building site. If you haven't already guessed, these are images of teaching and learning and by 9.10 am you are now embroiled in an animated discussion with eleven other teaching colleagues on the relationship between teaching and learning, the difference between active and passive learning, student-centred learning and a whole range of other ideas generated by the opportunity to free associate on the metaphorical images before you.

This is the beginning to the Teaching Improvement Project System (TIPS) course in the Medical School at The University of Nottingham. It has been found to be one of the best ways of getting experienced, but untrained, teachers to talk about the underlying assumptions and prejudices they all have about their teaching and to begin the process of exploring how students actually learn best. Although originally designed for health educators, the TIPS format is a general model that can be used in other curriculum areas in HE, and components of this course have successfully been used on non-medical staff training courses at our university.

DESCRIPTION OF COURSE

TIPS is an intensive 2-day workshop, usually for 12 participants with two teachers, and includes:

- formal teaching
- discussions
- active work in defining learning objectives
- planning lectures/seminars and demonstrations

- preparing instructional materials
- practising teaching skills
- giving individual presentations.

Participants prepare and present two ten-minute teaching sessions from their own lectures/seminars called 'microteaches'. Each of these is videotaped for private viewing and evaluation, followed by feedback from the teachers and, finally, course members.

LEARNING OBJECTIVES

Upon completion of the 2 day course participants should have gained the knowledge and skills enabling them to:

1. Differentiate between teacher-centred 'teaching' and student-centred 'learning'.
2. Write learning objectives appropriate to the learning needs of their students.
3. Plan, organise and apply presentation techniques in a number of settings.
4. Formulate questions which promote thinking.
5. Use methods which encourage active learning.
6. Evaluate their own and other's teaching behaviours.
7. Participate in peer teaching evaluation.

STRUCTURE OF A TYPICAL TIPS COURSE

DAY 1

• Teaching and Learning

As described above, cartoon images are used to stimulate debate on the the nature of teaching and learning and to help people reflect on their assumptions and prejudices.

• Learning Objectives and Assessment Criteria

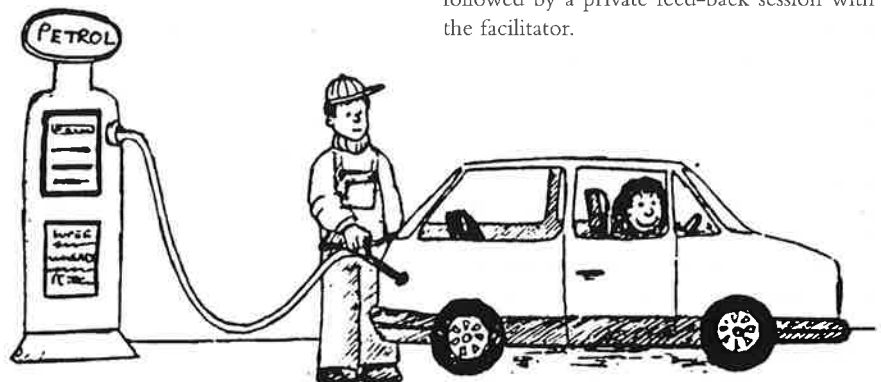
Participants are encouraged to think about what they want their students to be able to do after they have learned. This enables them to define realistic learning objectives that not only improve the teaching focus but also provide relevant assessment criteria.

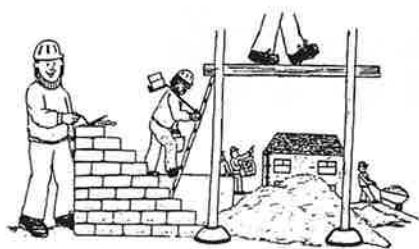
• Structuring Learning

Participants are offered a rationale and an opportunity to discuss a framework that can be used to structure a wide variety of teaching situations.

• Microteaching: self and facilitator evaluation

Participants present a 10 minute video-taped 'microteach' to the rest of the group. This video is then observed by the presenter, followed by a private feed-back session with the facilitator.





DAY 2

• Varieties of teaching

A focussed analysis and discussion of videotaped presentations of a variety of teaching situations from the big lecture to the small-group seminar and the bedside.

• Evaluating Teaching Styles

Group observation and discussion of sample microteaching presentations using a check list to encourage a critical analysis of teaching behaviour.

• Microteaching: self and peer evaluation

A second opportunity to present a 10-minute microteach, this time followed by group analysis and feedback.

TEACHERS AND PARTICIPANTS

Experience has shown that the course is best taught with multiples of about 5 people and one teacher. The main constraint is in the organisation of the microteaching, observation and feedback sessions; 5 people take 1 hour to deliver their microteach to the group, participants then view their performance followed by a 10 minute evaluation. Additional groups of 5 need to be run in parallel but they then require additional teachers, plus more rooms and resources.

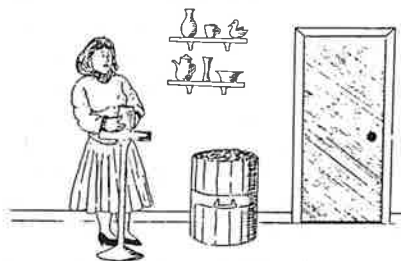
The TIPS course can be 'cascaded' by identifying those participants who have a particular interest in educational issues and who wish to become TIPS teachers. They then need to attend one course as normal participants. They may then act as 'facilitators' on subsequent courses, for instance helping with the videoing, assisting with the giving of feedback and taking detailed notes of the content and process. When they feel confident enough they can then assist or lead the teaching on additional TIPS courses. It is this cascade feature which may make the TIPS course particularly attractive to large institutions such as Universities since the course can be transported easily between faculties and modified to suit local use.

Anyone involved in the direct teaching of students can participate on a TIPS course. The content and process of the course are sufficiently general to be relevant to a wide variety of people actively involved in teaching across a range of curriculum areas. In Nottingham we initially targeted senior members of staff and were lucky enough to

attract a number of heads of department, professors and consultants who gave our first TIPS course a positive evaluation. This has set an example to others and we have had no problem recruiting further participants. In fact, in line with other areas of the health service, we now have a waiting list! In addition the cascade approach has doubled the number of TIPS teachers we now have and we are in the process of training more.

PEER EVALUATION OF TEACHING

Once staff have been on the basic TIPS course they are encouraged to become involved in peer observation groups using the techniques of teaching evaluation they have learned. It is useful to circulate an up-dated list of all TIPS participants so that staff can pair up with suitable partners. This procedure facilitates the process of continuing professional development among those participants who wish to improve their practice and develop their skills.



COURSE EVALUATION

The process whereby the participants evaluate and provide feedback on the course is very important. There are many features such as the timing, content and pacing which can be modified to suit particular groups of people. The programme for the two day course given above was eventually arrived at incrementally after the combined feedback from three TIPS courses, the first of which was a three day course. The programme was refined in the light of the specific criticisms and needs of Nottingham participants. It has now reached the point where it routinely receives very high evaluations from participants.

Costs

The cost of running a TIPS course depends on local conditions and whether for instance rooms and equipment have to be hired at commercial rates or can be made available for low cost within the institution. In addition the costs of the teachers are variable depending on

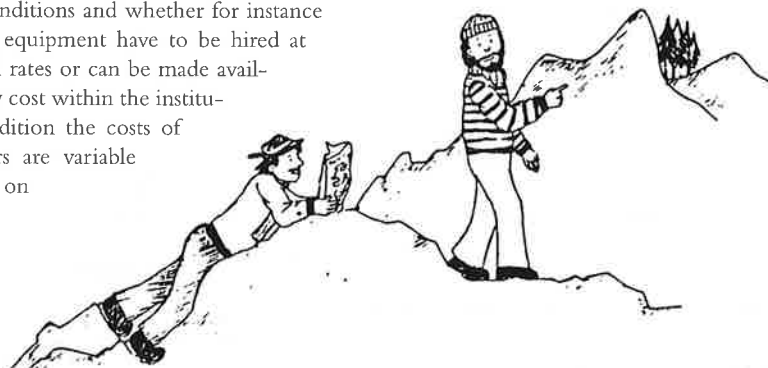
whether they are available 'in-house' or have to be bought in as outside consultants. The cascade approach can create 'free' teachers within a Faculty or department.

OUTCOMES AND CONCLUSIONS

The TIPS course does not claim to fulfil all possible teacher training needs. However, it does encourage teachers to focus on the active learning of their students as well as providing them with the type of learning objectives which enable them to take more responsibility for their own learning. Even on courses where Problem Based Learning and self-directed learning are the main vehicles for learning, well structured input from teachers, whether in the form of lectures, seminars or tutorials, is still important and the TIPS course is designed to improve the effectiveness of those sessions.

At the time of writing over 130 staff from a wide variety of medically related disciplines have been through the TIPS course in Nottingham and have given it an overwhelmingly positive evaluation. There is a waiting list of people wanting to come on the course and a further expansion into Post Graduate training. Indeed a 30 hour module based on an expanded TIPS format will become the core module of a Masters Degree in Medical Education beginning in 1996. Feedback reveals that the most important outcomes for participants are the ability to define their learning objectives, to structure their teaching and to evaluate their own teaching style and techniques. Furthermore in follow up studies the majority of participants claim that they are using more active learning techniques, that their teaching is now more student-centred and that overall they feel their teaching is more effective. It remains to be seen whether these changes are actually mirrored by improved student learning but that is the subject of further study.

Dr Reg Dennick is a Lecturer in Medical Education & Management at The Medical School in The University of Nottingham and a TIPS trainer. He has also recently been on part-time secondment to the University's Training and Staff Development Unit.



Oral Assessment in Groups

Assessment has been a core theme in *The New Academic* over the past few issues, as we have tried to examine the various ways in which this supremely important task can be approached. Here *Pat Grant* takes a fresh look at the oral: oral assessment in groups. She argues that for some fields – like teaching, for example – oral assessment is essential, but that special skills are needed for such assessment to be successful.

In a recent issue of the 'New Academic' Phil Race (1995), writing about the need to examine various methods of assessment, highlighted among others the *viva voce*, as a form of oral assessment. In this article I will discuss a particular form of oral assessment I observed while on a visit to New Zealand: oral assessment in small groups.

The assessment observed was for stage one of a Diploma course in teaching for in-service staff working in the Post Compulsory Education and Training (PCET) sector. Students doing the first stage of the Diploma could opt to be assessed orally or by written examination. The oral assessment could be taken individually or in a small group. Both the assessments I will describe occurred in small groups.

PREPARATION OF THE STUDENTS:

Prior to the assessment, the students were provided with information to help them prepare for the process. They were provided with 'planning sheets' which contained the learning outcomes of each unit, and questions to help them focus their thinking on the sort of questions they could be asked. Tutors were accessible to students prior to the assessment, in order to clarify ground rules and to answer any questions related to the process.

At the start of the group assessment, students were reminded of the ground rules; for example, they were required to speak from an 'I' experience, as the assessors were interested in finding out what they personally did in their teaching. They were also encouraged to interact with one another and to add to what others had said. It was made clear that the 'oral' was not merely about assessment, but was also intended to be a learning experience.

THE ASSESSORS

They were two assessors for each group of four to five students. Throughout the interview the assessors made notes on each student's achievements against the criteria being tested. At appropriate points, one of the assessors would

comment that they were satisfied that the criteria of a particular unit had been met and they would like to move on to examine another unit. Sometimes students were given the choice as to the unit they wanted to be assessed next; at others the assessor would decide. Assessors tended to decide when it seemed logical to link discussion with another unit. Occasionally the assessors were unconvinced that they had enough evidence from a particular student on which to decide, and in such cases would request more space for the identified individual so that s/he could demonstrate her/his ability to meet the learning outcomes. An example of this occurred in the first assessment when an assessor told the group that she would like some space for "A" to share what she saw as issues relating to biculturalism and gender in education as the others had already had their chance to do so.

Each assessment took about 3½ hours and ended with each student being given the opportunity to make a brief oral self-assessment of her/his performance. Assessors then gave the students feedback on how they had done in terms of meeting the learning outcome criteria for the units they had entered.

The assessors discussed openly in the students' presence their assessment of each student. In the second assessment there was a disagreement between the assessors about Student "B's" achievement on a gender issue in the Human Rights Issues Unit. Each assessor presented her case and gave a rationale for her decision. This led to a compromise where the student was given credit for the identified learning outcome and a request made for this issue to be addressed again in Stage 2. At the end of the session students were given forms on which they were asked to evaluate the process.

BENEFITS

Gibbs argued that there are some students "who do poorly in written tests but who have good oral skills and may display their knowl-

edge better in vivas". (Gibbs et al, 1988:93) This is certainly true for many people from "oral cultures" and, if we are truly committed to providing multi-cultural education, we should be assessing students in ways which are culturally fair. Race (1995) also highlighted this point in arguing for greater diversity in assessments which he saw as fairer to students. When it comes to fields like teacher training, I would see oral assessment as crucial because teaching is primarily an oral activity.

Oral assessment provides the assessor with a richer impression of the capabilities and understanding of the person assessed. Issues can be picked up and explored in ways which are normally not possible in written assessment. According to Rowntree:

"Assessment in education can be thought of as occurring whenever one person, in some kind of interaction, direct or indirect with another, is conscious of obtaining and interpreting information about the knowledge and understanding, or abilities and attitudes of that other person" (Rowntree (1987:4).

Oral assessment enables direct interaction in which more information can be obtained. It is also easier to check out one's interpretation of that information, which in turn leads to a more accurate assessment.

POTENTIAL PROBLEMS

Oral assessment requires a level of interpersonal skills rarely taught, and so it can be stressful for students. If oral assessment is to be used more widely, then we will need to give as much attention to preparing students for it as we do for written assessments.

Gibbs also indicated some other reasons why oral assessment might be problematic. One of these is "balancing" – the need to balance the desire to keep the assessee relaxed while at the same time being challenging in the questions asked, as well as the need to balance the desire to keep the assessee talking while asking questions that the assessor needs answers to.

Another problem identified by Gibbs is how to justify the outcome of the assessment when there is no documentary evidence. While considering these issues a problem, I do believe they can be overcome.

In both assessments I observed, the assessors were able to ask challenging questions while at the same time keeping the students fairly relaxed. This was possible because of the skills of the assessors, who prepared the physical environment so that it would be relaxing and prepared the students for the assessment. The structure for the assessment was made clear to the students and knowledge of structure does have a way of reducing anxiety. While it was true that the students knew in advance the areas they would be assessed in, it was also true that the questions were challenging. Challenging questions can lead to growth if they are specific and addressed supportively. Assessors need the skills to do this type of assessing and I am afraid many of our assessors have had no training in this area, so unless we can provide staff training, oral assessment could be problematic.

There was a potential problem involved in maintaining a balance between keeping the student talking with the need to direct the assessee to the areas the assessor selected; the students were so keen to talk, it was difficult to stop them. It took a great deal of skill on the part of the assessors in letting the students know that they were satisfied with coverage of a particular learning outcome and now wanted to move on to another. At the end of one of the assessments one of the students was heard to say, "I would have liked it to go on for much longer....there was so much I had to say that didn't get said". With less experienced assessors, the students might indeed have been given the opportunity to say much more; however, it is likely that all the learning outcomes would not have been assessed in the 3½ hours.

The lack of documentary evidence to justify the mark or decision could be a problem in the case of appeals. This problem was overcome to some extent in the observed sessions by having two assessors who made notes throughout the proceedings; thus some documentary evidence was created. The presence of two assessors also made for increased reliability in the assessment as the range of observation is greater and assessors can complement each other's skills and knowledge. The presence of two assessors means it is also fairer for students as the assessments are not affected by one person's likes or dislikes. Another means of ensuring documentary evidence in oral assessment is to use available technology (eg. video-tape, audio-tape) to make permanent records of the proceedings.

WHY A GROUP?

So far this discussion has concentrated on the oral nature of these assessments. These were,



however, oral assessments with a difference: they were carried out within the context of a group.

Teaching by its very nature is a co-operative activity; assessing teachers in a group seems, therefore, to be a useful way of getting them used to that idea. Most teachers will work in one sort of group or another, so the more experience they obtain in this area, the more chance they have of their skills developing.

That said, assessment in groups can bring its own problems, since the size of the group, the selection of the group members, the selection of assessors can all influence the outcomes of the assessment. In the first observed assessment, the students selected the people with whom they wanted to be assessed; in the second assessment, the composition of the groups was the result of convenience. The choice of fellow assessees might not always be possible in practice and this could be a problem, particularly if one member sees the group as an audience and wants to monopolise the session. Corey (1990:89) suggested that "the basic criterion for selection of group members is whether they will contribute to the group or whether they will be counter productive".

In the light of these observations, I would like to suggest that oral assessment could be used more widely in the assessment of HE students. For example, many courses include the assessment of prior experience for which students are required to prepare portfolios. Oral assessment could prove a useful and economical way of carrying out these assessments. It could also be used in many courses to increase the diversity of assessment. Let us therefore, add more variety to our assessment procedures and stimulate both our assessees and assessors alike.

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Acknowledgements

Thanks to the staff at The Education Centre, Central Institute of Technology, Wellington, New Zealand and to Bill Bailey at the University of Greenwich, for their help in producing this paper.

Pat Grant is a senior lecturer in the school of Post Compulsory Education and Training, University of Greenwich.

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What Others Say...

This time, we have only a small space in which to print some interesting and entertaining comments by teachers at the University of North London, first published in their newsletter *ExChanges* (February 1996). They were answering the question: "How do you know when your teaching is going well?"

WHEN I'M LEARNING

My teaching is going well when:
there are signs that the students are doing something;

I'm enjoying it;

I've established the process clearly enough and I'm not needed anymore but they are talking to me about it anyway because they want to;

the students find it a challenge;

the students are enjoying it;

I feel I've got time for it;

I'm being creative about how I am doing it and responding to the students;

I'm finding it a challenge;

the students talk about it after the module has finished;

I'm learning a lot.

David Andrew, BUS

TURN THEIR HEADS

I tend to judge whether teaching (of a formal-lecture type) is going well when people turn their faces to me instead of their neighbours, the notebook in front of them or the floor. All my lectures are addressed to the class, not read – notes are only very seldom consulted. If there is a feeling of rapport, with students engaging with the ideas, it is usually reflected in attention visibly paid.

Quite often, in such sessions, there are challenging questions from the students. These are not offered politely to fill an awkward silence, but seem to be urgently made, the response keenly listened to – and not always acquiescently.

I feel a lecture has gone well when the majority of students spontaneously adopt this sort of posture in class and feel impelled at times to raise questions or objections. This applies with just as much force to lectures or

seminars offered to peers in other institutions.

I enjoy this sort of teaching, and definitely do not enjoy speaking to a relatively unengaged sort of student group who are glad to take refuge in note-taking, for example.

Involvement and unfeigned (as far as can be detected) interest are the essential ingredients, in my view. These are much aided by my having given up reading from notes. When one does not look directly at students, they do not usually look directly back as in conversational exchanges. An unfortunate distancing may occur just because of this.

It also helps to participate in, not covertly or otherwise to 'lead', student-run seminars. It is not just a polite fiction that we learn together at these times. When we do, this can spill over into lectures, with positive results.

Ken MacKinnon, Film Studies

Assessment Strategies in Scottish Higher Education

A COSHEP/SHEFC Project — Project Coordinator: Dr Dal Hounsell

The ASSHE Project is a major study of evolving assessment practices in Scottish higher education. It is being undertaken jointly by the University of Edinburgh and Napier University, Edinburgh.

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- ★ At the **Northumbria Assessment Conference** on 4-6 September 1996 where we shall also be presenting some of our findings
- ★ A printed **Inventory** of changing practices will be launched at the ASSHE Conference and can also be ordered separately



If you would like to be kept in touch with developments in the ASSHE Project, please write to:

ASSHE Project Office, TLA Centre, 34 Buccleuch Place, Edinburgh EH8 9JS

or email: asshe.project@ed.ac.uk

See also the www pages at: <http://www.tla.ed.ac.uk/asshe/pages/ASSHEhom.html>

ACTIVE TEACHING

I think that my teaching goes well if:

- (i) I have a good idea of what I want to cover – the issues I want to raise and (importantly) a structure to this information.
- (ii) I know the audience – not necessarily personally (though that is nice!) but in terms of their purposes, aims, interests, reasons for being there.
- (iii) I like the topic I am teaching (almost always the case – I guess I'm lucky!)

I never read lecture notes. I work from the back of an envelope – I like the active teaching mode. But I like to 'break up' or 'fragment' the active teaching with active 'audience' participation (talking in 3's or 4's, working in pairs, doing shared tasks.)

Ruth Merttens, *Teaching Studies*

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New focus

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**CHANGE AT THE BOTTOM,
CHANGE IN THE MIDDLE BUT NO
CHANGE AT THE TOP!**

The Changing University?

Edited by Tom Schuller

SRHE and Open University Press, 1995

£45/£16.99

ISBN 0 335 194 20 6

The question mark in the title of the proceedings of the recent SRHE conference may seem at first perplexing. We know that the university has recently been changing dramatically. No question about it. Staff and students have coped with modularisation, semesterisation, expansion to a mass higher education system, relentless reductions in resources. These are a few of the obvious changes which have increased workloads and placed enormous burdens on an expanding and more diverse student body. Reading the chapters in this excellent collection, which will be of relevance to higher education for years to come, it seems there may be more

BOOKS

than a hint of irony implied by that question mark. The book does not relate to obvious changes in the university over the last decade but rather to the less visible cogs of the higher education machinery – the administrative procedures, the funding structures, the admissions policies, the style of leadership required to lead the universities forward, the teaching and learning styles appropriate to mass higher education, the changing philosophy of the university.

The book provides of wealth of insights and perspectives on essential points of policy which should be seriously considered to ensure that the changes experienced by staff and students, and the blurring of the boundaries of the entire post-compulsory education system, are matched by appropriate changes to administrative and funding structures and a rationalisation of higher education policy.

An early chapter gives a 30 year perspective of the changing university, highlighting clearly the changes in external factors such as governance, finance and structure, while indicating that internally there is an ongoing struggle to hang on to the vestiges of an elitist system. The result is tension and dysfunction. A global view of higher education is provided in chapters on Australia and New Zealand, America, Canada, Africa, in addition to a European perspective with important lessons to be learned about funding mechanisms and transfer systems. Other topics include new teaching and learning strategies, the view from further education and the impact on students of the changing university. All chapters in this book are a thoroughly worthwhile read and provide a comforting balance between pessimism about the current muddy waters of higher education and optimism about the future if appropriate action is taken soon.

Lorraine Stefani

Strathclyde University

JUST LIKE THE REST OF US

Innovations in Mathematics Teaching

(SEDA Paper 87).

Edited by Ken Houston

SEDA (1994) £12.00, ISBN 0 946815 88 7

I've always been a bit in awe of mathematics and mathematicians. There's something mysterious and powerful about mathematics – at least that's my impression. So it was a revelation to read the 18 case studies of mathematics teaching contained in this publication and discover that when it comes to teaching and learning, mathematicians are just like the rest of us.

The problems approached in these mathematics case studies: making the subject interesting, encouraging students to work with the subject and ask 'what if ...' types of questions, dealing with increasing class sizes or poor prior knowledge of the subject, teaching service courses to non-specialists etc are familiar to most educators irrespective of the subject they teach. The teaching/learning approaches described in the case studies: small group methods, CAL, role playing, student projects and poster presentations etc, should also be familiar to many; if not from personal experience then from texts such as the '53 Interesting Things...' books of Graham Gibbs and colleagues or A Handbook for Teachers in Universities & Colleges by Newble & Cannon.

While the general type of problems (opportunities?), described in the case studies aren't novel, and the type of methods taken to solve them generally widely used in education, the authors of the case studies deserve much credit for actually putting the methods

into practice. It is one thing to consider a new teaching approach, it is quite another to put it into practice – often in the face of considerable institutional inertia.

This publication will be of value to academics who wish to initiate new methods of mathematics teaching in their institution. It will help prove to them and to others, that not only should innovative mathematics teaching be considered, but that it has already been successfully undertaken in several estab-

lishments. Use of the publication for this purpose may be enhanced by the information on how much staff time was used in preparing and implementing the new methods which is given in some of the case studies, furthermore student evaluation of these teaching innovations appears positive.

Graham Clarke

University of Wales, Bangor

LIKE A NOVEL

Juggling for a Degree: Mature Students' Experience of University Life

Edited by Hilary Arksey, Ian Marchant, Cheryl Simmil

Unit for Education in Higher Education, School of

Independent Studies, University of Lancaster

(1994) £6.95, ISBN 0 901800 49 X

I like books on education that read like a novel. Juggling for a Degree consists of a multi-voiced series of short narratives by different narrators on the them expressed in the title. One by one these first person narratives tell their own, unique story of the conflicts, joys and difficulties the protagonists meet on their journey towards self-fulfilment and a degree. True to type as a contemporary narrative, at the end of each story 'other voice', unnamed and various, add their afterword: serving as commentary or chorus on each experience, the complement or counterpoint it, adding their own insights. There is no one authoritative voice, no academic summing up or resolution.

The writers' reasons for taking a degree are different: a mother who is having her 'turn' after she has 'done the Earth Mother bit in a

previous existence'; a policeman who wants to become a social worker; a once successful businessman at last fulfilling his real ambition. What the nine accounts have in common is clear sense of an urgent need being met as these adults embark on and progress through their university education ('I had a dream' confesses one): for knowledge, development, self-knowing, a sense of achievement, even liberation.

In some case the degree has opened up employment prospects, in others not. This is seen as less important than the process itself, coming to see the world and themselves differently.

This small book, edited by some of the students themselves, is part of the Innovations in Higher Education Series on students' own experiences of (the new mass) higher education from the Unit for Innovation in Higher Education, at Lancaster University. For those working in higher education it has a feelgood effect: it makes our job seem worthwhile. A good read – and not a novel.

Phyllis Creme

University of North London

RATTLING THE BARS OF RESEARCH CAGES

Research as Social Change: New Opportunities for Qualitative Research
 Michael Schratz and Rob Walker
 Routledge (1994) £37.50, ISBN 415 11868 9
 £12.99, ISBN 0 415 11869 7

Perhaps the best introduction to Schratz and Walker's new book is given in their own words: "Our aim in this book is to write about doing research in ways that go beyond describing different methods that can be used to collect data and the uses that can be made of them in different settings and to recognise the essentially social and personal nature of research." And, later, "Without our active intervention, research becomes, one way or another, an instrument of the state... This book is about research, but about a particular form of research, concerned to counter the tendency for research to become the currency of institutional power."

A BRAVERMAN NEW WORLD?

Academic Work

Edited by J Smyth

SRHE and Open University Press, 1995, £42.50

The stated aim of this edited volume is to provide and apply a theoretical framework for the analysis of changes in academic work over the past two decades or so. In a lucid introduction, the editor sets out what he views as the major changes in the context of academia over the past two decades or so - principally the three Ms of marketing, managerialism, and monitoring (of quality, efficiency, and enterprise) - and in the nature of academic work, including fragmentation, reduced flexibility, loss of control over teaching and research, and the ending of collegiality. He then points up the need for a theoretical framework to link these developments to each other, and suggests that this might be accomplished by adapting Braverman's well-known 'de-skilling' thesis. This, of course, was originally developed to explain the decline of craft working in favour of unskilled work in terms of the imperatives of capitalist development, and he hypothesises that a similar analysis may be used to illuminate the apparent proletarianisation of academic work.

This, presumably, is the ball which contributors to the volume were invited to pick up and run with by applying it to a range of case studies and/or areas of academic work. But the contributors seem to have interpreted their brief variably, to say the least, with some focusing fairly tightly on the Braverman thesis while others go off at personal tangents both theoretically and empirically. The result is something of a hodge-podge of theories, case studies (Australia [several times], Canada, the UK and the US but none outside the Anglo-American systems), and areas of academic work

Using language which is clear and understandable even to relatively inexperienced researchers, they go on to elaborate on ways of opening up research so that the voices of the participants are less likely to be overpowered by either that of the 'researcher' or of the institutional contexts in which research occurs. The activities which they describe vary from traditional folk stories to use of metaphor, photographs and drawings, mind maps, memory work, recorded dialogue and interpretation of emotional factors in conducting research. These techniques are analysed drawing on the wisdom of participants in a group process - Schratz and Walker place a strong emphasis on the social nature of research and, as recommended by Whitehead, turn the spotlight fully on their own practice as well.

Interspersed with description of these techniques (in sufficient detail to enable readers to have a go themselves) the authors weave in a critical analysis of how research actually works in

(including assessment, entrepreneurialism, hours, salaries, status).

Within this mixed bag there are some outstanding and interesting papers, for example, Marginson's sophisticated analysis of markets and their implications for academic work, Miller's tightly focused chapter on the state, economics and academic labour processes, and Slaughter and Leslie's fascinating and revealing investigation of academic attitudes to the impact of entrepreneurialism upon their work. But the sum of the parts fails to add up to a whole, ie to any kind of coherent approach to the central questions.

While this is neither necessarily unhealthy or abnormal in edited volumes, usually some

attempt is made at the end to draw the diverse strands together and summarise the achievements of the enterprise. In this case, contributions are outlined at the start but that vital synthetic chapter is missing, and so the matter is left very much up to the reader. The latter is not helped a great deal either by the index which omits the names of authors cited in the text.

Both a synthesis and a more extensive index would have greatly assisted the reading and evaluation of this book by this member and, I suspect, others of the toiling academic masses.

Pip Ferguson

The Waikato Polytechnic, Hamilton, New Zealand

TIME FOR THE DECORATING...

Education for the Environment: towards an agenda for Higher Education

Edited by Malcolm Plant

SEDA Paper 85 (1994) £8, ISBN 0 946815 78 X

Repainting the department can be a good idea. Good for morale, good for coffee time discussion. A fashionable colour is green. This book is a colour card of many varieties of green from which you can choose.

Greening the curriculum is a difficult task if you wish to be anything more than superficial. The preparation has to be done in a careful, painstaking way. The primer and undercoat are as important as the gloss. Painting a whole department, a whole university even, is more than a job for one or two DIY freaks. What's more, people notice the colour you've chosen and keep noticing. Once time is invested, there's not much chance of a new coat of paint for several years. You're stuck with it.

This set of papers gives you the choice of all shades of green, from the dreams of a post-grad student who doesn't have to pick up a paintbrush to the musings of academics who've sketched impressive plans that look great on paper and might some day look good in real life - if the time is ever right to implement them. The book really is a colour card of ideas ranging from politically overcorrect education-speak to down-to-earth employer comment. Like any colour card, the reader can pick and choose, and the end result depends as much on the creativity of the user as the offerings set out here in the first place. Taken in this way, the way a SEDA Paper should be, it works.

My own suggestion? Just remember that pastel shades often stand the test of time that much better.

Duncan Reavey

University of Natal, Pietermaritzburg

MANAGING INFORMATION FOR RESEARCH

A book for first-time researchers

Elizabeth Orna with Graham Stevens

Open University Press (1995) £8.99

ISBN 0 335 193 97 8

For contract researchers, 'managing information' may, in its widest meaning, encompass most of what the research involves. For students aspiring to research degrees, managing information is still important, although more is necessary in terms of originality, significance and a research design appropriate to the research problem. As managing information is crucial for all researchers, a book with this title is to be welcomed.

The major problem that researchers have with managing information in the narrowest

meaning of the term is to find and establish an effective and efficient storage and retrieval system for their data. Chapter Three of this book helps, although most researchers would have welcomed more in terms of the range of systems available (computerised and manual); financial costs of putting into place; costs of time in learning how to use and then in using regularly; and the balance between ease of input and ease of retrieval.

Other chapters consider more peripheral aspects of managing information; such as mapping the research territory; documenting what one is doing; managing one's time; the 'products' of the research; designing the presentation of the research (the only chapter by the second author); and techniques for improving writing. In all instances, advice is interspersed with illustrations which cover diverse fields.

All researchers appreciate access to a reference collection of books giving different perspectives on research. This book would be a useful addition to such a collection, giving as it does the perspective of an information consultant. It will be particularly appreciated by researchers who are looking for a book which links information management to a wide scope of research related issues; is easy to dip into; is written in highly conversational style; and uses visual presentation more frequently than is the norm for books on research. This book is, as it says on its back cover, a book for first-time researchers; how far it will be useful for any particular researcher, only that researcher can decide.

Pat Cryer

Senior Visiting Fellow, University College London

COMPUTERS IN TEACHING

Special issue of *Psychology Teaching Review* – Volume 4 (2)

Teaching the practical skills of the social psychologist :

The analysis of political interviews
(N. Hammond & P. Bull)

A path analysis of student computer performance
(M.J. Brosnan)

Learning abstract concepts with computers : The experience of users learning about correlation
(G. Gibbs & D. Robinson)

Human experts and computerized procedures in knowledge assessment (M. Kambouri & K.R. Gegenfurtner)

Matcher : An environment for compiling and analysing questionnaires using a simple distance measure (M. Lefley)

Hypermedia in education - monitoring the development of hypermedia documents (M. Pohl, M. Prenner & P. Purgathofer)

Competence versus performance in critical reasoning : Reducing the gap by using Convince Me (M. Ranney, P. Schank & C. Diehl)

Learning through doing : Computer-based learning for practical psychology (S. Richards & K. Nott)

For those of you who haven't come across it yet, *Psychology Teaching Review* is the journal of the British Psychological Society's Special Group for the Teaching of Psychology. It was established to encourage research on teaching and learning in psychology, to serve as a vehicle for the sharing of good practice and to improve the teaching of psychology at all levels.

A recent (September 1995) edition featured selected papers from the 2nd *Computers in Psychology* conference held at the end of 1994 in York, edited by Nick Hammond and Anne Trapp. What follows is a brief overview of four of the papers (although I have listed all eight papers should readers wish to follow them up in more detail).

Stephen Richards (University of Teeside) and Kenneth Nott (University of Newcastle-upon-

RESEARCH ROUND-UP

Tyne) argue that traditional models of computer-based learning often adopt pedagogic strategies based upon information delivery (e.g. screen based text). Although this is starting to change, the authors argue that even interactive multimedia often lead to passive learning experiences. The paper discusses the design, implementation and evaluation of the *Interactive Laboratory* which is currently in use with over 100 first year psychology undergraduates. They report that 86% of this cohort felt the software was useful. The authors assert that through student evaluation the *Interactive Laboratory* will grow and change with time and it is their hope that the software will eventually become available to all psychology departments at a low cost.

Lesley Allinson (University of Humber) and Peter Bull (University of York) also describe their innovative use of multimedia technology in teaching the practical skills of the social psychologist and the *HyperCard*-based learning package for conversational analysis of political interviews. Their paper describes in detail the active learning process that *HyperCard* provides. The system is currently being evaluated by the authors (although no results of this were presented) and further development will include enhanced note-taking facilities, student created video-sequence generation and analysis, and use as a research tool for discourse analysis. The authors boldly conclude that multimedia is a fundamental requirement and not a mere technological enhancement.

Previous research has found that a quarter to a third of students suffer from "computerphobia" (e.g. resistance to talking or thinking about computers, fear or anxiety towards computers, hostile or aggressive thoughts about computers) and that females are over-represented in such

findings. Mark Brosnan (University of Greenwich) describes an empirical study of student computer performance on fifty undergraduates and assessed which psychological factors affect performance. The study found that computer anxious students interact with computers in a different manner to computer confident students. The major implication of such a finding – at least in evaluating computer aided learning – is that in volunteer samples, computer anxious individuals will self-select out of any evaluative process leading to false impressions about the "success" of technological learning techniques.

Graham Gibbs and David Robinson (both from the University of Huddersfield) studied student use of *Correlation Explorer* (a fact free, almost didactically neutral computer learning tool designed to help students learn about correlations, scattergrams and regression). Getting seven first year psychology undergraduates to think aloud during the specified tasks. They some participants who had been asked merely to explore the program with no prior tasks and only minimal assistance, did successfully learn about correlation. However, subjects often retained significant misperceptions and that the best use of such software might be in a remedial context to detect lack of understanding. On a wider note, the authors report that verbal protocols are a good way of examining learning with computer-aided learning software and that evaluation of other similar types of software (*Crosstabulation Explorer*, *Significance Explorer* etc.) appears appropriate.

The whole special issue of *Psychology Teaching Review* serves as an ideal introduction to many of the issues involved in multimedia technologies. Although the papers are specific to the teaching of psychology, the wider implications will be of interest to all those involved in the teaching of higher education.

Mark Griffiths

Psychology Division, Nottingham Trent University

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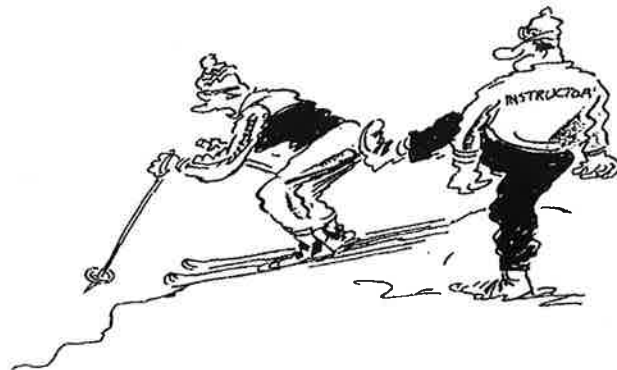
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FORUM

Debate and argument are second nature to academics – and a good thing too. In this issue of *The New Academic*, we have created a new section – *Forum* – specially designed to allow debaters to express their views at longer length than is usually allowed in a Letters page. Rather than the usual 200 words, debaters are allowed up to 800 words to make their points clear. All the Editor asks is that authors focus on ideas, refrain from criticism of the person, and be as concise as reasonably possible within the constraints of the word limit.

Here is our first Forum, with *Dr Mike Hayes* commenting on a paper published a year ago, and *Professor John Radford* and *Liz Beaty* continuing the debate on the need for academic professionalism. Contributions to these and to future debates are invited.

“SUBJECT LOSS AND CURRICULAR DRIFT” – OTHER CONSIDERATIONS

Saunders (*The New Academic*, Summer 1995) has accurately described the current *modus operandi* of most UK institutions of higher education. In so doing he has raised several valid questions that need substantive answers and in a true spirit of constructive criticism has formulated nine very reasonable recommendations for action. A serious reviewer of Saunders' paper would be hard pressed to find errors of fact and the analysis and conclusions of the author are not widely speculative. If the paper is to be adjudged 'provocative' then it must be not on what it contains but moreso on what was omitted.

One difficulty with the paper as published is that it is set almost exclusively in an HE context even though an introduction to the paper stresses *current economic, organisational and ideological influences* which surely must affect more than just those in higher education. Saunders (1995) has effectively isolated the HE process from the rest of the educational corpus and from the world of work, in effect avoiding the question “What is the purpose of Higher Education and a *priori* who or what does it serve?”.

It is too easy and much more comfortable for the staff of Higher Education establishment to believe that HE, the **process** in the scheme,

INPUT → PROCESS → OUTPUT → IMPACT

is maintained **for** them and not by them. Higher Education is a staff convenience to allow research, scholarly activity and cerebral free-fall to occur. Occasionally, these activities are inconsiderately interrupted by teaching, by audit, by diverse assessments, by study leave, and by attending conferences, etc. This is not the whole truth and neither should it be, but how many do consider the HE process as, at worst, a catalytic process of change – of an individual – or, at best, merely the ‘next-

bit' in a genuine process of life-long learning? Put more simply, how many in HE maintain a regard for the input – the students – (dismiss the terms customer, client, punter they have not helped a great deal and *ipso facto* students study!). Have academics in designing 'new' processes for higher education really moved away from teaching students what they, *the teachers*, want them to know because they, *the teachers*, are comfortable with it this way?

Post-modularisation, post-semesterisation, post-credit accumulation and transfer and because HE institutions have not embraced the transfer market for good teachers as they have for good researchers, it is the same teaching staff wearing their old subject-badges, wanting to deliver the same, previous quantum but now constrained by 90s packaging. If anything and paradoxically, modularisation may have reined in curriculum drift by restricting the academic to having to deliver what is now written down as the syllabus and having to be assessed and completed in a given timespan. A possible outcome of this fossilisation of syllabi and systems is greater consistency and uniformity. Another possible outcome of this, and for which there is some evidence, is that there is an increasing mismatch between the output from HE and the current needs of industry, ie the impact value remains low. In times when industry only thinks it knows what it wants, and many HE teaching staff remain largely isolated from the world of real work, giving students greater choice over what they study may be ideologically correct but makes little economic sense. Little wonder that the issues of “what can graduates do?”, “What should graduates know?” receive such necessary attention.

Saunders' paper is so correct for the narrow context of higher education, but below HE and beyond it there are other current economic, organisational and ideological influences affecting the input and output/impact stages, eg student finances, HE funding, prescriptions for employment and size and nature of the next labour force.

Of Saunders' nine recommendations for action it is possible to produce evidence that action is underway for several of them, eg the future roles and practices of Quality Council and Funding Councils (2; 3; 5) the future role and conduct of External Examiners (4), the continuing ideological battle over NVQ and GNVQ (8). Is it too much to hope that Dearing III will address Saunders's point nine (“A national forum should... determine... the long-term future character of British university education itself.”)? Additionally, another HEQC survey is beginning to make sense about comparability of academic standards and thresholds. This leaves just two points, one of which could be subsumed by the other. If Saunders will accept a National forum for every subject he defines and each forum is representative of the input, process, product and impact phase, issues of adequate learning and appropriate knowledge and skills will be mutually resolved.

Is there an inconsistency in Saunders' logic? He acknowledges increasing bureaucratisation and documentation. Aren't these more likely to lead to conservation rather than loss, convergence rather than divergence?

Rather than subject loss there has been a net gain of subjects, not all hybrids and not all esoteric. Curriculum drift may not be as simple as subject expansion but with increasing reductionism fuelled by modularisation, Academic Levels, Learning Outcomes and an increasing unorthodoxy in the stop/start of learning, the subject is in sharper focus now and the **academic** more accountable than ever.

And, if not – who is to blame?

Mike Hayes,
Head of Academic Unit,
University of Wales Institute, Cardiff.

REFERENCE:

Saunders, A. (1995) The lost subject and curricular drift, *The New Academic* 4 (2) pp 17–19

WOULD YOU ACCREDIT IT?

In 1971 Halsey and Trow published their classic study *"The British Academics"*. On the whole their subjects lived rather favoured, civilised lives with good incomes and time to pursue their scholarly – or other – interests. A quarter century later, 'O how fallen! how changed' (Milton, *Paradise Lost*). 'Paradise', roughly corresponding to the short-lived heyday of the UGC, say 1920 to 1960, has indeed been lost. Everywhere, not just in the UK, academics are being transformed into 'workers in the knowledge factories', producing the students and research demanded (quite legitimately) by industry or government but with less and less control over decision making and their own activities.

Paradise is not going to be regained, as probably everyone realises. There is only one practical alternative to being workers, and that is to be professionals. There is no legal definition of a profession, but crucial elements include high level qualification and training, autonomy, self-monitoring. The buzz-word for the first of these is 'accreditation'. My own profession of psychology has sought to develop professionalism through the well-established mechanism of chartering, comparable to engineers, accountants, and others. With the introduction of the British Psychological Society's Diploma in the Applied Psychology of Teaching, it is possible to gain the status of Chartered Psychologist through teaching (at any level). It may suggest a way forward.

The Diploma demands both written and practical work. The former includes the psychology particularly relevant to teaching, but also knowledge of the educational system, teaching methods, ethical issues, the nature and needs of psychology students, methods of assessment and evaluation. Practical work includes case studies and assessed teaching. There is also a dissertation of 8-10,000 words. It will be hoped eventually to upgrade the Diploma to a higher degree.

It has been notorious for years that academics don't hesitate to offer training to "other" professions, but scorn it for themselves. At present, the nearest academics come to a professional qualification is normally a PhD which, whatever its shortcomings, is taken to be a qualification in research. Very few actually spend their lives on that. They must include also, as a minimum, teaching, administration and counselling, to varying extents. There is an ever increasing gap between the professional and the amateur, or untrained, way of doing all these. And one would wish academics to have some knowledge of the nature and history of higher education, to give a wider perspective.

The main danger of formal qualification is the creation of a closed shop, which is anti-

thetical to my personal view of education as essentially an open process. The potential advantages are a better deal for students, restoration of university values, more productive academics – and not least, support and financial rewards more comparable to those of other professions. A university professor should be like a medical consultant or senior lawyer, head of a 'firm' of teaching and research assistants.

On balance, yes, I would accredit it. There is really no alternative. Unless, perhaps, it is already too late.

John Radford

*Emeritus Professor of Psychology
University of East London*

Editorial Note:

As many readers are aware, the Association of University Teacher recently published a paper entitled "Professional accreditation of university teaching". We present here some extracts from the formal response to this paper sent on behalf of SEDA by Liz Beaty, Chair of the committee which runs SEDA's Teacher Accreditation Scheme.

SEDA AND ACCREDITATION

Yes, SEDA is wholeheartedly in agreement with the principle of professional accreditation for university teaching. It is important to value the professional nature of teaching in higher education. This professionalism cannot be left to chance. Teaching is an activity which requires skill and knowledge...knowledge about how students learn and about approaches to teaching is available and should underpin teaching practice alongside knowledge of subject discipline. Theory must inform experience as a prerequisite for professional practice in teaching as in other professions. This presents academic staff with a need for development beyond their subject expertise and beyond the proven ability as researchers.

Teaching is a complex set of skills and professional judgement. Reflective practice which is at the heart of a professional's relationship to work requires time and attention. To become professional teachers, therefore, academics require staff development as well as experience. Thus staff development should be required, and rewarded with professional status i.e. professional accreditation. Accreditation should not be merely given for a time period in work (as happens with many current probation arrangements). Rather, accreditation should be awarded for acceptable level of performance at the end of a sustained period of staff development and supported practice.

With any new qualification it is much easier to begin with the new entrants and in SEDA's case we found it a necessary place to start... In

running our courses we have found it relatively easy to gain resources and time for new full time members of staff and a great willingness from them to take part. Experienced staff have taken our recognised courses, but at present they see less advantage in gaining a qualification from it. The requirement for professional accreditation would of course change this in a relatively short time.

SEDA has had a set of design criteria guiding its development of the Teacher Accreditation Scheme. "...the Scheme:

- is based on the principles and values and objectives and learning outcomes which can be adjusted to meet emerging needs and situations
- is as simple as possible to implement and operate
- is clear and open, with no hidden agenda or small print
- empowers those who take part
- achieves wide acceptance by practitioners and those in senior positions of responsibility in HE
- is developmental, helping to enhance provision, rather than simply being an artificial hurdle
- involves those leading or coordinating the programme, rather than providing judgement at a distance..."

SEDA has the only national scheme of professional accreditation available for university teaching. It works, it is popular with those who take part and it is growing. Our motive in designing the scheme was to avoid the need to reinvent the wheel in each institution. We believe that much can be gained by building on good practice through dialogue... it would be a great waste of effort and expertise to develop a separate and competing scheme of professional accreditation.

Liz Beaty,

Chair, SEDA Accreditation Committee.

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