the NEW Academic

Sian Grinnall

A Child's View of the World What has this to do with teaching statistics?

see page 4

Drawing by Sian Grinnall, age 6

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. To speed production, the Editor would appreciate receiving finalised material on 5¼" floppy disk, in Wordperfect or ASCII, wherever possible.

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.

Illustrations

Photographs (black/white), drawings and diagrams may be used for illustration: copies of artwork should be submitted in the first instance, but author should be prepared to provide originals (clean camera ready copy) or suitable bromides for publication. Photos of authors (black/white) are welcome.

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: Summer, 15 March; Autumn, 15 September; Spring, 15 January.

Acronyms used in *The New Academic*

● HE   Higher Education
● BTEC   Business and Technical Education Council
● HND   Higher National Diploma

The list will be added to as appropriate.

Introducing the New Editor

Lisa Hill

Callington Studios

IT IS NOW MORE THAN two years since *The New Academic* was formed. Over that time we have welcomed a succession of guest editors - academics drawn from different institutions - with Danny Saunders taking on the last three, and maintained a format that served as a half-way house between the traditional academic journal and a lively newsletter.

Yet the success of *The New Academic* in filling a vital gap in higher education by promoting "good" teaching and learning has given us sufficient bouyancy, both fiscal and moral, to appoint a professional editor. So it is that I welcome Elizabeth Mapstone as the editor of *The New Academic*. For the previous 6½ years she has been editor of *The Psychologist*, the monthly bulletin of the British Psychological Society, which she developed from a small staid journal into a fully fledged magazine with a nice mix of serious and entertaining, informative articles.

Elizabeth's first career was as a journalist; in mid-life she felt the need to get an academic qualification and she studied psychology at Oxford University, going on to get a DPhil. She was thus admirably qualified to take over the editorship of *The Psychologist* in 1987 and, by the same token, to become the editor of *The New Academic* in 1994.

This issue of *The New Academic* already sees some changes in style. In the Autumn we look forward to the launch of a brand new design, which we trust will lead to a wider and more committed readership as well as offers from those who find the urge to write about teaching and learning in Higher Education irresistible.

David Jaques
Chair of the Editorial Board

Heralding Change

I AM VERY PLEASED to have been invited to edit *The New Academic* and to help create out of its successful beginnings an even more readable and influential magazine. I confess I enjoy change - not change for its own sake, of course, nor change as destruction, but change as transformation and growth. This is an exciting time when all of us, wherever we work, must embrace the realities of a rapidly changing world. As many of the contributors to this issue point out, we need to be able to share ideas, to have a forum where people facing the same problems can discuss ways of dealing with change, ways of turning problems into opportunities, constraints into creativity.

Already it is clear that *The New Academic* is becoming this forum. Most of the articles in this issue are from teachers in higher education who have overcome those widespread problems of inadequate funding, large classes, or new demands on the curriculum, in innovative and creative ways. They describe how they solved particular problems in their particular subject areas. But the exciting thing about all these contributions is that the ideas are applicable to many other subject areas as well. It just takes a bit of imagination.

Now our task is to ensure that all future issues are packed with solid information and creative workable ideas. So we invite all innovative teachers to let us know what they are doing. Help us to make *The New Academic* an exciting and influential magazine.

Elizabeth Mapstone
Editor

REPORTS

A Quartet of Innovations

Stephanie Marshall and Tim Clarke report on a one-day, regional staff-development workshop ("An Inspector Calls"), held last year at the University of York. They outline the four innovative teaching methods presented, designed to complement traditional teaching approaches and enhance student learning.

D ELEGATES, representing some 200 years of university teaching experience, were given four presentations by successful teaching innovators from York. Each described methods which use small group teaching as an effective way to promote deep learning. Interim small-group discussions covered the viability of each method in the context of limited resources, large student numbers, preparation and administration difficulties and the need for specialist knowledge.

Computer Enhanced Learning

Dr Julian Richards (Archaeology) showed how the computer can enhance student learning of archaeology in two ways: first, an interactive, PC-based graphics

simulation of an archaeological dig enables students to experience dig management; second, the Campus Computer Network provides an information system as an important and useful resource for the undergraduate.

The graphics simulation increases the quality and quantity of taught material. A user screen displays the plan of a typical dig, and indicates the financial resources available. Students select the method of earth removal, from large mechanical digger down to fine camel-hair brush. Students then decide on trade-offs between rapid earth removal and the risk of losing valuable artefacts.

The Campus Network is really a learning environment. No paperwork is provided: all is stored on the Campus Computer. Even handbooks, Departmental and University Regulations and the like are retained in this form. Teaching and learning are made more productive and efficient using modern technology.

Information Technology was seen as a way to respond to growth while maintaining quality. Students are stimulated by the novelty of the approach, and their response in turn encourages staff. Using graphics simulation students are exposed to material that would otherwise be impossible to teach in reality.

Case Work

Dr Adrian Leftwich (Politics) uses an approach originally devised at Harvard and now widely used by their Business School. The Case Method is problem-oriented and aims to enhance the students' skill in sifting and sorting data, interpreting findings and decision making.

The case is a specially researched document. In the social sciences, cases are often based upon real-world problems or issues, disguised if need be. Data are made available to enable the students to analyse and resolve the problem or complete the task.

The case work could consider competing theories, analytical frameworks or bodies of knowledge appropriate to the issue. Students work either in small groups or individually to resolve problems through some kind of solution, analysis or recommendation.

The case method is inductive: it starts with a problem as a means of approaching theory. The skills of analysis, evaluation, problem-solving, choice and decision-making are developed, and if a group structure is used, inter-personal skills are developed too. The method also enhances confidence.

For those who have used the case method, the release of intellectual and creative energy, the depth and breadth of the learning involved, and the sheer enjoyment of doing something different can inject a vitality into learning which brings out the best in students of all abilities.

Group Work Projects

Dr Chris Clark (History) introduced the group work project method in 1982 to enhance his teaching of the American Revolution.

Groups of approximately a dozen are set projects which broadly cover the subject matter. For example, "Script and record tapes for a radio series explaining the American Revolution to a general audience". Students then determine how it will be achieved, setting deadlines and delegating responsibilities. During timetabled 'slots', the tutor becomes a further resource, whilst being aware of the need for strategic withdrawal.

Through intellectual debate, a consensus has to be reached and deadlines met. The method promotes intense engagement with the historical issues and increased confidence to participate fully in seminars and tutorials, conduct research and evaluate documents.

Off-Site Learning

Dr Duncan Reavy (Biology) used a weekly one hour slot for three or four students to provide an escape from the straightjacket of assessed work. He wished to provide students with more than just a handful of essays at the end of term.

Groups determine the subject and an end product. One group produced a booklet putting principles of ecology and conservation into a York context. Action planning led them to conduct research: a school visit, a working lunch with the organiser of the Greater York Countryside Project and finding commercial sponsorship to print

the booklet. Two thousand free copies were subsequently distributed to 63 local schools.

A sense of achievement and an expansion of interpersonal skills are major benefits. The confidence gained undoubtedly carries over to other areas of students' work, facilitating deep learning.

Implications for the Future

All four sessions had readily identifiable common themes: a more extensive range of resources, a context-driven pedagogy, the promotion of a range of skills including effective communication, negotiation, action planning, and most importantly, a resultant deep engagement with and subsequent understanding of the subject under study. All four approaches highlight the 'enjoyment' factor as central to generating motivation.

Three key benefits of the day were: leaving behind working pressures and being in an enabling environment; a cross-disciplinary approach, promoting cross-fertilisation, to explore notions of good practice; collaborative staff development more generally.

Participants said they had gleaned new ideas, benefited from comparing basic philosophies of education and justifying the new, expanded higher education system. They now felt more confident about meeting the Quality Assessors to demonstrate their efficacy. The take-home thought for the day was "quality through collaboration": collaboration between students in promoting quality learning, and collaboration between academics in promoting quality teaching. ❐

Dr Marshall and Dr Clarke are at the University of York

Correction

In the last issue of *The New Academic*, the address given for Sue Wall, joint author of "Networking across Europe", was incorrect. She is Assistant Dean of the School of European and International Studies at the University of Derby.

Everybody's Doing it

Philippa Ashton reports on a conference held in Preston in September 1993, on "Developing quality staff: induction and mentoring in further and higher education".

RESEARCH HAD SHOWN a high percentage of institutions employing mentoring within staff development programmes and a wide variety of practice. The conference served to share examples of practice and to highlight common issues.

In the keynote address Patricia Partington identified quality audit, the student charter and "top down" managerial initiatives as making fundamental changes. In particular, new staff need support, and some staff want more guidance at departmental level about the nature of their jobs and performance expectations.

Mentoring - the pairing of one person with experience in a particular area with another with less experience - was offered as a good method for its flexibility and cost effectiveness.

There were seven workshops which outlined different ways mentoring is being used in education. It was clear that mentoring can fit into a variety of schemes - informal, departmental-based, institution-wide or as part of a teaching course. Several factors seemed to be key to the success of mentoring. These were:

• finding appropriate mentors
• preparing mentors and mentees
• letting mentors find their own 'style' rather than imposing a methodology
• getting mentoring into the institutional culture
• getting the support of key senior staff
• rewarding mentors (in some way other than financially!)

The day allowed delegates to renew, review and invigorate their ideas about using mentoring. Despite not being a new idea, mentoring has come into its own in staff development. ❐

Philippa Ashton is Enterprise Co-ordinator at University of Central Lancashire.

SEDA-Scotland Born

SEDA-Scotland is a professional association for staff and educational developers, and for all teaching staff providing tertiary education in Scotland. Its aims and philosophy parallel those of SEDA. Ray Land reports.

THE FIRST MEETING of SEDA-Scotland took place in Glasgow in early December 1993. David Baume, Chair of SEDA, attended the meeting and helped clarify the status of SEDA-Scotland and its relationship with SEDA. An interim Steering Group was formed at the meeting to bring forward ideas concerning the framework, role and operation of SEDA-Scotland.

In principle, it was agreed that SEDA-Scotland will have the same status as the major SEDA Committees, with its own structure, way of working, and business plan. The funds already held by SEDA-Scotland (in its former guise as CICED and fleetingly as SCOTSCED) will be lodged alongside SEDA funds.

SEDA-Scotland will work within the distinctive tradition and features of the Scottish HE system, but will also act as a representative of SEDA in Scotland. Membership of SEDA-Scotland will be automatically conferred on all SEDA individual, associate or institutional members based in Scotland. The Secretary is Peter Sandison, Scottish College of Textiles, Galashiels (tel. 0896 3351).

For further information on plans and activities - read *The New Academic!* ❐

Ray Land is at Napier University and on the Editorial Board

Useful Skills?

Dave Brookes reports what students and graduates are saying.

DO GRADUATES USE the skills we teach them? Replies from over 700 Oxford Brookes University graduates (from 2000 circulated questionnaires) who are now in employment produced the data in figure 1.

Nearly 40% thought their course focussed too highly on the acquiring of knowledge, whilst only 3% thought there was too much emphasis on the acquiring of skills.

A second questionnaire examined the perception of skills by 400 current students, drawn from various years and fields (figure 2).

Since our graduates are finding that enterprise skills are useful in the workspace, then it would be hoped that skills continue to be developed in the institution to help improve the employability of our current, and future, students. ❐

Dave Brookes is Coordinator for Student Enterprise at Oxford Brookes University, Headington, Oxford

Figure 1: Current Usage of Skills by Graduates in their Present Occupation

Figure 2: Student Perception of the Importance of Enterprise Skills
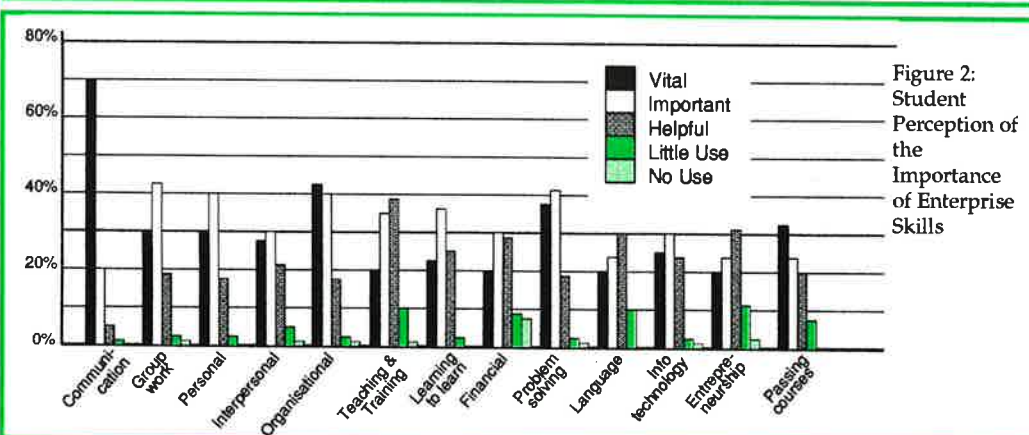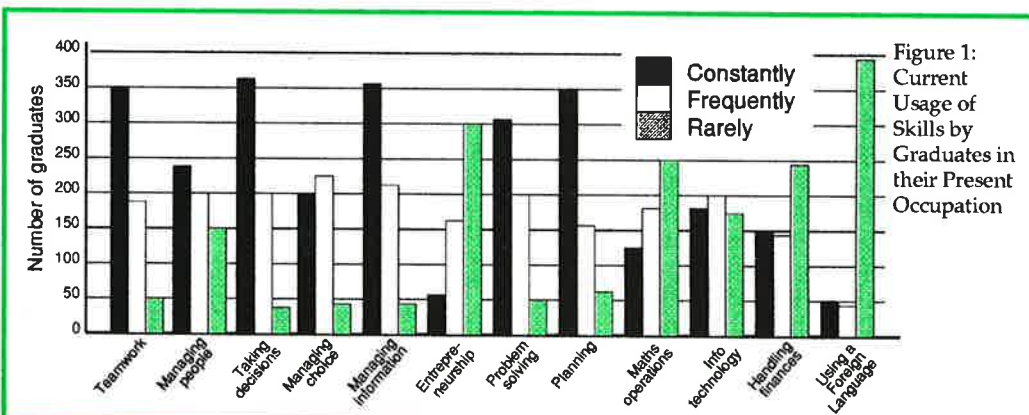
A Practical Experiment

Paul Arnold, Catherine O'Connell and Peter Meudell describe a new approach to teaching experimental and statistical methods in psychology: the Tutorial Project. Staff and students have found this a stimulating innovation, in which students can make real research contributions.

W E HAD MANY reasons for seeking new ways of teaching experimental psychology and statistics: our second year practical course had remained largely unchanged for some years, even though psychology had developed rapidly during this period, and the experiments which formed the basis for the old practicals had become outmoded; we were aware of an uneven workload among staff, only some of whom were involved in running the practicals and marking the laboratory reports submitted by each student; and we were faced with the problem of student numbers, which had doubled in the intake for 1992, putting increased pressure on already inadequate laboratory facilities.

Looking for alternatives to the usual approach, we took advantage of the experience of members of staff who had spent time in other institutions. One colleague, for example, had recently spent a sabbatical at the University of Liège in Belgium, where the Psychology Department has no practical laboratories and so through necessity had to devise an alternative way of teaching experi-

mental methods. They developed a system of *"travaux pratiques"* whereby students form groups of four or five and work as apprentices to a member of staff and assist in ongoing research. The student projects can be quite extensive and can consist of a series of experiments, providing useful data for the member of staff, valuable training in experimental methods for the students, and original research for all involved.

In many ways our problems were similar to those in Liège and the extended group project approach seemed to be a feasible solution. Our intention was that in the first term each member of staff would supervise a group of 4 or 5 students on a 10 week project. In the second term each student group would do a second project with another tutor in a different area of psychology, thus ensuring that they would gain experience in a variety of statistical and experimental methods. At the end of each project, the student group would give a spoken presentation of the joint work to members of staff and other groups and submit a collaboratively-written report.

The present scheme

○ Stage 1: First meeting with tutor where possible projects are discussed.

○ Stage 2: A project is selected through mutual discussion.

○ Stage 3: Students carry out a literature search, using on-line and CD-ROM bibliographic databases, to gain knowledge of previous research in the chosen area in order to design their own experiments.

○ Stage 4: Students write and submit individual literature reviews relevant to their experiment in Week 5 of the term.

○ Stage 5: Students conduct their empirical research in their project area. They collaborate in the data gathering, analysis and presentation of their results.

○ Stage 6: Students give a spoken presentation to other student groups and members of staff in Week 10.

○ Stage 7: Collaborative project report submitted one week later.

How it worked

Students took an active part in reviewing the literature, designing the experiment, gathering and analysing the data and presenting the results in written and spoken form. These are all new forms of assessment for us. Previously our students would simply write a traditional laboratory report.

The groups tackled a diverse range of research problems. Just two examples are: *"Factors influencing errors in wiring a three pin plug"* and *"Children's knowledge of the earth's shape and gravitational field"*. Some of the projects have served as useful pilot studies for members of staff and one project so far has even been published.

In order to write their literature reviews, students made extensive use of the on-line and CD-ROM bibliographic databases, so much so that university library staff in the Information Centre claim that psychology students are their best customers. Some student groups designed computer-based experi-

ments and made extensive use of specialised computer software available in the department (such as *Signalyse*, a digital signal detection programming package).

Among staff there is general satisfaction that students are achieving a higher quality of work than in the previous system. One lecturer wrote:

"I think the Tutorial Projects are a very good innovation and both of my groups have done excellent work and obtained experience of working in schools."

Another wrote:

"Overall I think these are a much better way of training students in thinking about design of experiments. They also clearly bring out issues relating to what can be done and what might be done, and I for one have really enjoyed this form of teaching."

Just two of the illustrations carried out by students in their practical psychology project.

NO GRAVTY!   GRAVTY!

Gareth (age 8½) illustrates his understanding of gravity.

Factors influencing errors in wiring a three-pin plug.

Bob Pomfret

Some problems

Several members of staff felt that working in groups was very new to some students and that they seemed to have difficulty in organising themselves. A number of students were reported to show considerable trepidation at the prospect of giving a spoken presentation.

To deal with these difficulties, we are organising a series of complementary workshops for the session 1993-1994, run in collaboration with the Careers Service and Drama Department. These workshops will focus on areas such as team building, making effective presentations,

and evaluating the performance of peers.

Two other issues raised in the evaluation relate to assessment. Reservations were expressed by some staff and students about the fairness of awarding a single mark to all members of the group irrespective of their contributions.

We are reluctant, however, to abandon what may be the most valuable and useful aspect of the Tutorial Project. We are currently exploring solutions such as the use of peer assessment to moderate the group mark. By making explicit that learning to work as part of a team is also part of the purpose of the Tutorial Project, we hope to develop a culture of cooperative working. ❑

Dr Arnold, Ms O'Connell and Professor Meudell are with the Psychology Department of the University of Manchester. Professor Meudell is managing a two year Enterprise Project in the department and Ms O'Connell is an Enterprise Development Officer.

More Effective Seminars

Russell Deacon explains how to ensure that a seminar benefits all students, and not simply the presenter. He calls the new approach the "student-centred seminar".

W HO BENEFITS from a seminar?

Probably the student presenter benefits from the need to investigate and evaluate the topic presented, but does anyone else?

L. B. Curzon points out that *"presenter and class are unequally matched so that the group is reduced to the defensive posture of silence and non participation"* (Curzon, 1990). This is the same criticism levelled at lectures by many prominent educationalists: many lecturers look on a seminar as merely a student lecture.

Phil Race (1991) has found that students only retain about 5% of a lecture or seminar, but they retain 50% by discussing a subject, 75% by explaining this subject to fellow students and 90% by teaching this subject to somebody else. A traditional seminar, therefore, may result in presenters gaining that 90% retention, but the other students would only gain 50% at the very best and 5% at worst.

The aim of the Student Centred Seminar (SCS) is to get all of the students up to that 90% retention level. In the traditional seminar, emphasis is on the individual giving the seminar; in the SCS, that emphasis shifts to the group as a whole, with the student (previously the presenter) acting as a facilitator. This student's task is to ensure that the rest of the group is motivated and directed to learning the topic in hand, applying group learning methods. Both student facilitator and lecturer play only a sideline role. It is the group that is the main engine of the seminar.

How does it work?

At Cardiff Institute of Higher Education, first and second year HND Public Sector Management students were each allowed to choose one seminar topic, from a list of approximately 30. They were then informed that the seminar would be "student-centred" and that they were merely to facilitate learning by acting as a catalyst for the group. It was also their task to ensure that everyone in the group contributed by selecting an appropriate method which would encourage this.

Once the student presenters had chosen their topic they were given examples to encourage group work, drawn from Habeshaw, Habeshaw and Gibbs (1988). Seminar group sizes ranged from 8 to 20.

A typical politics seminar title was: *"Without the policies of Mrs Thatcher and The New Right, Britain would have lost its international position both economically and politically."* How true is this statement in the light of recent events?

I will use this example to illustrate the methods of student-centred learning that proved to be the most popular with the students. Habeshaw et al (1988) list many more.

> *Student presenters are told they are "merely to facilitate learning by acting as a catalyst for the group". It was also their task "to ensure that everyone in the group contributed".*

Rounds

This involves each student in the group taking it in turns to speak. The group normally sits in a circle. Rounds can be either at the beginning or the end of session, to start interaction or end a seminar. Their main advantage is that they make everybody contribute, ensuring more student participation and learning. Their main disadvantage is that a subject may soon become exhausted, depending on the group size.

The round might be started by a question such as *"What do we know about Margaret Thatcher?"*

The group reaction to this might be:

Student A   *Mrs Thatcher was the first woman Prime Minister.*

Student B   *She followed monetarist principles.*

Student C   *She was in office for 11 years.*

And so on, until everyone has made a contribution. The seminar can then be developed further, based on this initial starting point. This also gives the presenter a good indication of the group's background knowledge.

Circular interviewing

Students again sit in a circle. Then each student asks the person opposite a question. That student answers the question then asks

Traditional and Student Centred Seminars: a comparison

	Traditional	Student Centred
Time contribution	Student talks for up to 40 minutes. Very little group work.	Student talks for 5 mins max; the rest of the time whole group talks and discusses the central theme.
Questioning:	Student asks the group if they have any questions to ask? Very few if any are asked.	A series of questions is given for the whole group to answer and discuss.
Feedback:	There may be some response from the more talkative students.	The whole group will give feedback on the questions. Everybody's views are heard.
Who works?	The student presenting the seminar.	The student presenting the seminar does background and support work. The group also does a great deal of work.
Who learns?	The student presenting the seminar.	The whole group.
Motivation:	Students tune out after a few minutes.	The whole group is actively engaged throughout the whole time period.
Skills developed: Presenter	Research, problem-solving and oral	Research, oral, problem solving, creativity, group management
Skills developed: Student	Aural	Problem solving, aural, working in groups, solving problems within time constraint, analysis, oral, creativity

debate being conducted by one speaker against another, whole groups are involved in the preparation of and participation in the debate.

The seminar group is divided in four sub-groups. Each of these represents a section of society affected by Thatcherite policies, and will address a question such as: *"Did Mrs Thatcher's policies provide this country with a sound economic base for the future?"* The groups might be constructed like this:

> Group One: Trade Unionists
> Group Two: Conservative party
> Group Three: Business Leaders
> Group Four : Labour Party

The person conducting the seminar would be expected to provide each group with a handout containing necessary background information. A sheet containing all the information for the four groups in question would be handed out at the end of the seminar.

Role play

The previous method (debates) really leads on to role play. This is a particularly popular method, especially in areas such as Social Policy where it is easier to envisage someone in a particular topic area i.e. homelessness, poverty or drug abuser. Here the student is perhaps able to relate more fully to issues in a personal way.

Brainstorming

Brainstorming is a method for group problem-solving. Ideally the group should be over five and under twelve in number. A key question is given, e.g. *"What evidence is there to indicate that the ideas of Thatcherism still continue after her fall?"* A scribe is appointed who then writes up the contributions from the group. Only short ideas or words should be written up. These can be expanded later in the seminar. When ideas have run out, the group can go back through the words they have written down and try to expand their meaning. When they have concluded the brainstorm they may present their conclusions back to the group as a whole for comment and discussion.

another student a different question, and so on until everyone has taken part. So a student exchange might go:-

Student A *Where do you think Mrs Thatcher's policies originated?*

Student B *I believe there was a great deal of influence from a number of factors including...*

Student B *What effect do you think Geoffrey Howe's resignation had on Mrs Thatcher's Premiership?*

Student C   *It was certainly a major blow....*

Buzz groups, pairs and triads

The group is split into groups of two or three students, and given a subject to discuss e.g. *"What was the effect of Mrs Thatcher's policies on the miners?"*

As there are only two or three in each buzz group, all will be able to make a contribution, and tackle issues more thoroughly than perhaps the full group could.

Once the subject has been discussed thoroughly a spokesperson for each group is appointed. They then feed back their conclusions for the main group to discuss.

Debates

These are a common form of discussion in politically orientated subjects. However, instead of the

Line ups

This is a good method of dividing people into groups for some of the other student presentation methods. They are asked to state where they stand on a particular issue, e.g. *"Do you believe Margaret Thatcher was a good Prime Minister?"* The presenter of the seminar would then get the students to stand in a line depending on whether they say yes or no to this question. The result can prove to be a good starting point for selecting people for other methods of group work like role play or debates as well as merely assessing the attitude of the group as a whole.

Students' reactions

All students felt they made a positive contribution to group work, and that the group responded positively to them. Perhaps it was the variety of methods used that kept everyone interested. Over 90% of students who used a particular presentation method felt it effective enough to be used again.

In response to a questionnaire, second year students in particular were enthusiastic. They were able to compare the SCS with their experience of seminars the previous year, and typical comments were:

> *"Different from last year's, stand on the soap box for 10 mins, then sit down"*

> *"In this seminar there was group participation"* They also noted that these seminars lasted *"much longer"*.

A majority of second year students reported being "interested", and many felt "enlightened" and that the seminar had been "just right". First year students claimed to have been "amused" as well as "interested" and "stimulated", and that the time passed very quickly. Very few students were critical.

On the positive side, students felt that SCS made the subject area more interesting and enabled them to hear subjects about topics in a different way from lectures. It enabled discussion without a great deal of preparatory work, was informative and informal. Some of the more frequent comments were:

> *"Everyone got involved in inter-group discussions"*

> *"Everyone who spoke had enthusiasm and knew what they were talking about"*

> *"Seminars were presented in a down-to-earth way"*

> *"The class felt more relaxed and were given a different perspective. Time flew"*

On the more negative side, they thought that some people tended to dominate discussion and others failed to contribute much, despite deliberate attempts to counter this. Students did not like being put on the spot and made to answer questions, even though educational studies suggest that this method results in the student retaining 90% of information given. Some students also thought that others did not make an adequate contribution to group efforts in the seminar work. Some other comments were:

> *"Could get carried away with ideas."*

> *"Felt I was saying too much"*

> *"Having to represent a view that I don't hold"*

> *"Getting stuck on the same topic"*

The role of the lecturer

The lecturer can be seen to have a dual role in the SCS process, firstly as an assessor and secondly as a facilitator.

The assessor role is to ensure that the student is assessed in accordance with BTEC guide-lines and fulfils the necessary criteria to achieve both a grade and fulfil their (BTEC) Common Skills. BTEC require the assessment of students studying public administration options on the Higher National Diploma (HND) in Business and Finance. These assessment activities should include: practical exercises; role play and other purposeful group activity; oral, aural and visual processes and presentation. Therefore it is natural that the seminar should be developed to encompass all of these activities; in order that the students be assessed adequately. These seminars last approximately 55 minutes.

A comment sheet can be drawn up for the assessor to note down certain points, to give gradings for such factors as: What method was used in the seminar presentation? What was the effect of this? How did the group react? What points were stressed? What was learnt? When the seminar has finished, the comments made on the sheet should be adequate to award a grade to the student in question. A copy of this sheet should then be given to the student for further reference and any weaknesses bought up to strength.

As a facilitator, the lecturer's role is to ensure that both the presenter and the group gain the maximum from any presentation made. Student presenters should be given every help. They should be clear as to what they are doing and the desired affect of this. It is too wasteful of students' time and resources if they present a misdirected seminar which results in the group becoming confused and disorientated. Many of the methods used in seminar, e.g. brainstorming, should be explained in lectures first so as to give students a clear indication as to their proper use. The student should be able to come to the lecturer for guidance both before and during the presentation.

Any weaknesses that become apparent during the seminar, of presenter or group, should be corrected and re-assessed at a later date. The lecturer should also reassure students who are nervous or anxious, and emphasise that presenting a seminar is something to be enjoyed rather than feared. ❐

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Race, P., (1992) 'Developing Competence'. Professorial Inaugural Lecture, University of Glamorgan.

Russell Deacon lectures in Public Sector Management and Social Policy in the Faculty of Business Information and Management, Colchester Avenue Centre, Cardiff Institute of Higher Education.

ENGINEERING

Preparing for the Real World

Guest editor Kate Exley introduces this special section on teaching engineering and preparing future engineers for the 21st century

IN RECENT YEARS many engineering departments have made great efforts to prepare their students for the changing demands of future employment. This preparation includes acquiring, not only the information and knowledge base of the appropriate engineering discipline, but also an appreciation and development of the competencies and skills required to perform effectively in the workplace. To achieve the latter, a whole range of non- traditional teaching approaches need to be incorporated into the curriculum.

Some departments are necessarily further down the curriculum development road than others, and it seems to make sense to try and dis-

seminate examples of good practice and lessons learnt as widely as possible. The requirements of engineering departments vary enormously, but it is usually far easier and less time-consuming to adapt and modify than it is to build from scratch.

To assist the communication flow between those who have imaginatively developed their courses recently and those who wish to do so in the near future, Ivan Moore and I collected examples of 'exciting' teaching in Engineering for a forthcoming SEDA paper*. Here we give a taste with four ab-

breviated articles taken from this collection. Three describe practical ways of introducing engineers to real world problems. A fourth discusses the implications for the curriculum of a subject which is changing constantly and rapidly.

Non-engineers will find this section interesting and useful too. The concrete examples from one discipline may spark ideas for many others whose work has practical implications in the real world. ❑

*See also *Innovations in Science Teaching*, Paper No. 74, available from SEDA at £8 inc. p&p.

Photo depicts the rivetting of aeroplane skins, a process being investigated by final-year student Howard McGlashan (Leeds Metropolitan University) at British Aerospace, BAE Chadderton, Aerostructures.

Real Business Enterprise

Students at University of Nottingham provide real goods and services as part of their Business Project module.
Kate Exley and Vic Gilgeous explain.

A NEW MODULE entitled "Enterprise" has recently been introduced in the Department of Manufacturing Engineering & Operations Management. This business project idea, inspired by a school scheme called "Young Enterprise", forms an assessed element of the second year for approximately thirty BSc (Hons) students. The module objectives are for the students to work in small teams on a project which involves the creation, running and winding down of an enterprise which provides real goods or services. The work involves generating a full business plan, raising and managing capital, establishing a company name and launching a business. After three months trading, the company is wound down.

The business ventures started by the students have been varied, imaginative and usually profit making! For example student teams have established businesses offering fast service film developing, T-shirt printing, designer baseball caps and furniture manufacture.

Some of the projects have been so successful that outside companies have wished to place commercial orders with them long after the 'completion' of the project. The work of one group, who chose to design and manufacture quality rubber toys (see photo), was featured on Central TV. Their project included the development of a new process that allowed large quantities of natural rubber toys to be made in a commercially viable system which could be set up virtually anywhere.

The student groups meet on a fortnightly basis with the Director of the project, Dr Gilgeous, to discuss the progress of their business and to determine appropriate future actions. The groups have a rotating Chair and a Minutes Secretary who completes a Work Log after every meeting. Individual performances within the group are under scrutiny in terms of their involvement in the crucial group activities of:

○ planning

○ dealing with issues arising

○ examining alternatives

○ discussing/presenting actions

○ taking action

○ showing good field work

○ presenting a case

○ quality of meeting minutes

○ quality of Work Log.

These activities are assessed by the tutor who observes the group at work and reads the group's Work Log which details what actions the group has taken and who has done what. This accounts for 20% of the marks.

At the end of the project, each group prepares a 5000 word report which describes the project and considers whether or not the business should continue: this accounts for 60% of the marks. In addition, the students make a 15 minute oral presentation of their work to the rest of the class, which accounts for the remaining 20% of the marks.

The Enterprise module has proved to be both cost effective and very popular with the students. The module director is currently exploring ways of involving the students more in the allocation of marks for individual contributions to the group. Key factors of the approach to be adopted include:

○ interviewing each student to assess their performance in relation to the group;

○ the completion of an individual questionnaire to assess the contribution made to the different project management areas of planning, organising and controlling;

○ enquiring about each student's perception of their own performance and that of their peers in the group.

The development of the module was supported under the Enterprise in Higher Education Initiative at The University of Nottingham. □

Dr Exley is Staff Development Officer and Dr Gilgeous is a lecturer in the Department of Manufacturing Engineering and Operations Management at the University of Nottingham.

Tactical Exercises and Mechatronics

Edward W. Reed explains how he has adapted the military approach of Tactical Exercises without Troops and helped students approach problems in mechanical and electronics engineering.

WHEN TEACHING tactics to officers in the army, bookwork patently has limitations and fighting mock battles is very expensive. A somewhere-in-between approach is needed and this is fulfilled by what is known as TEWTS (Tactical Exercises Without Troops). It is very effective. One stands on high ground viewing town and country, deploying imaginary troops, infantry, tanks and so on. Exercises are set by instructors and students present their solutions for comment and discussion by staff and other students. The staff also give a solution, again open to criticism. It is emphasised that no one solution is correct. The yard-stick is, "Would it work?"

A similar approach can be applied to teaching mechatronics, which is a combination of mechanical and electronics engineering, for the solution of real manufacturing problems. This approach encourages the students to think for themselves, to express their views and to realise

> "Examples are taken from industry. It is almost impossible to invent examples that are not banal or too simplistic."
> (Author's words at mechatronics conference.)

that their solution is often as good as those suggested by their colleagues. It is important that the lecturer praise different views, give encouragement and not scoff at the more eccentric ideas presented. Typically engineers are not very articulate and this course can help personal development.

Setting appropriate problems and the discussion of possible solutions enable teaching staff to draw upon and make excellent use of their engineering experience gained outside higher education. It also helps to bring the reality of manufacturing and business into the undergraduate curriculum.

The course:

Real manufacturing problems are analysed and discussed on our 15

week course for final year Manufacturing Systems Engineering undergraduates.

When we started, we could deal with only pre-digested problems, presented in written case-study form. The lecturer had, of course, already analysed the situation and considered appropriate solutions. Now, however, with the advent of the camcorder, we can present problems on video and show actual situations.

The class is usually attended by about 30 students. This number can be effectively managed in one group. First, the video demonstration is given and then briefly discussed by the lecturer and queries answered.

Students then have *at least a week* to think about and develop their preferred solution. This is done in their own time, before being presented in a short written report.

Once the proposed solutions have been collected, the lecturer leads the group in a general discussion, concluding with a comparison of student solutions and the lecturer's solution.

During the discussions, new equipment and techniques are introduced and technical journals are consulted. Sets of electrical and electronics catalogues and Original Equipment Manufacturer journals are provided for each student.

At the beginning of the course, the students do badly, but they learn quickly, and soon start to do well. This gives them lots of confidence. People enjoy doing something well which they once found difficult.

A typical mechatronics example
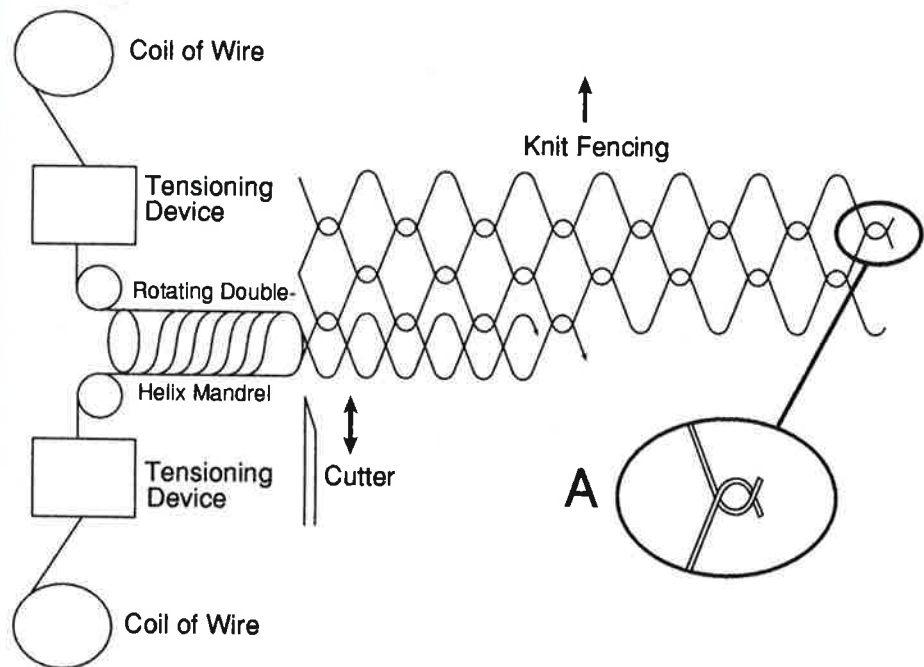
The diagram shows the principle of operation of a wire fence knitting machine. The tensioning devices are adjusted manually; correct tensioning is vital otherwise the mandrel does not bend the wires properly and the machine fails to knit. Students are required to design a system to monitor wire ends and summon operative when necessary.

Assessment:

Assessment is continuous and contributes 3.75% to the final degree classification. A series of fairly short solutions is presented by individual students to the lecturer: each is about two pages long, includes diagrams, and, very importantly, programming flowcharts.

Evaluation:

The aim is to give students bags of confidence to tackle new and real problems - or to put it another way, to try to put the lecturer's old head on to the student's young shoulders. It seems to work and the students say they enjoy it. A disadvantage of this approach is that experience does take years to acquire and it shows. The time it takes to find sympathetic industrial contacts and to go and video work place environments is also a cost which needs to be considered.

Nevertheless, recent comments by students about mechatronics and this way of teaching are very favourable. The students enjoy the enthusiasm of the lecturer and the way the subject is presented from an applications point of view that makes the practical aspects of the work clear. ❑

Dr Reed is with the Faculty of Information and Engineering Systems, Leeds Metropolitan University

Communicating Skills

A group design exercise which simulates the work of professional engineers has been developed for the final year undergraduates at the University of Ulster. N.D. Black and Ivan Moore explain how students acquire practical skills through data communications.

DURING THE first semester, the fundamentals of data communications are covered in the normal lecture and tutorial format. The class is then divided into groups of three and an "invitation to tender" document is issued to each group on behalf of a fictitious company for the design and supply of a data communications network.

In the scenario, the company has a regional office in Belfast, three main offices and nine satellite offices in Northern Ireland. The tender document sets out the functional requirements and existing systems in the company, and the groups are required to submit a report detailing their proposed design for the network, together with a competitive costing.

During the course of the assignment, each group is permitted two thirty-minute meetings with the lecturer:

1. The lecturer acts as a representative of the commissioning company, and respond to queries on the tender document.

2. The lecturer plays the role of a British Telecom Engineer in order to provide further technical advice on equipment, lines etc.

Assessment is based on the meetings, a technical report and an oral presentation.

A design exercise of this type represents a highly effective vehicle for developing the students' practical design skills in the subject area and in the broader engineering context. Such skills include the ability to

relate cost to specification and performance, to interpret commercial technical literature, to work in groups and to deliver within a limited timescale.

It also serves to enhance written and oral presentation skills and gives the students the opportunity to submit their designs to industrial scrutiny.

These are important skills to develop in students on a course which seeks to produce graduates aspiring to be professional engineers. ❐

Dr Black is with the Department of Electrical and Electronic Engineering, and Ivan Moore is Staff Development Officer at the University of Ulster.

Language Louts?

"SOME OF THOSE MOST responsible for fouling the English language" are US academics, according to a Financial Times columnist. While we all nod knowingly, we all could probably add the names of one or two UK academics to the list of offenders against good taste in language.

Staff at Lake Superior State University publish an annual list of words and expressions "that have been misused, overused or generally proven useless". Top of their hit list is "politically correct", a selection that many would heartily endorse. They dislike "mother of...", presumably when applied to battles, and while

apparently "paradigm" is "all the buzz among jargon makers in Washington", writers who wish to be understood are advised to avoid it.

Some of my own pet hates are "utilise" ("use" is almost always better), "in order to ensure that" for "so that" and "infer" when the writer really means "imply".

What are yours?

Answers on a postcard, please, to the Editor: a selection of your favourite horrors will be published in the next issue. ❐

Engineers Fit For Industry?

University education is to undergo considerable changes, due mainly to the present Government's desire to increase the proportion of young people in Higher Education. K.M. Holford and C.J. Moore argue strongly that a flexible approach to these changes can maintain the standard of engineeering graduates and enhance the prestige of engineers in industry.

THE REFORMS of the higher education system, as detailed in the Government White Paper of 1991, and introduced in the Further and Higher Education Act of 1992, caused Engineering Departments in England and Wales to reassess the aims and objectives of engineering undergraduate courses. In an attempt to deal with the proposed increases in student numbers, most universities have been willing to accept the suggested modular approach to education. There is no doubt that most universities currently overteach engineering to students. Engineering courses are notorious for crowded time-tabling and an emphasis on the learning of factual material at a highly advanced level across a large variety of topics.

Advances in technology have added more subjects, and as it is always easier to add than to omit, the engineering syllabus goes on growing.

The need now to teach "more-for-less" necessitates changes in engineering curricula such as, perhaps, the culling of old knowledge to make way for new. Careful design of engineering syllabi will free the students from the restrictions of the lecture theatre and guide them towards exploration of an exciting ever-changing subject.

A major implication is the necessity to provide well-designed laboratories and high-quality extracurricular resources such as library books, videos, and computers. Industrial collaboration is vital for the formation of engineers who, by repeated exposure not only to new technology but also to problems encountered in the field, will begin their careers with an increased awareness of industrial aspects.

> "Engineers need to be resourceful, adaptable ... If we allow our undergraduate courses to revert to a "taught" degree ... it is difficult to see how these additional qualities will be encouraged."

Undergraduate courses should give students a true image of the engineer in industry: as an authority on technology, an innovator, a leader of others and a communicator.

Lecturing and learning

The traditional lecture remains the most effective way to pass on large amounts of factual information to large groups of students. It gives scope for emphasis on vital areas and can be inspirational. Its major drawback is summed up in this quote from Cross (1986):

> "All too often information flows from the notebook of the professor to the notebook of the students without going through the minds of either."

Learning is also improved by supporting the traditional approach with aural and visual methods. Research by Lewis (1990) has indicated that in order to benefit from education students need to learn effective communication, which requires four skills: listening, reading, writing, and speaking. Cooperating techniques, case studies and task-based learning groups are methods which are very effective if time permits their use. Computer

Aided Learning (CAL) techniques are precluded in many areas at present by cost. The cost of hardware and software is not always the issue, but maintenance and support need a high level of commitment.

Student responsibility

Technological advances produce such rapid changes that the engineer of today and the future cannot rely on past-learned techniques, but must be able to understand and adapt to new experiences. Indeed, there is a need in engineering courses for an increased emphasis on understanding and a reduced emphasis on knowledge.

"Instilling an attitude of pride into students has given the medical and legal professions the status which they now enjoy."

With increased pressure on lecturing staff to perform, the emphasis is on good examination results. Engineers need to be resourceful, adaptable and capable of understanding and absorbing new information. Traditionally, graduates seem to be people who can think on their own, organise their own work, take the initiative and be prepared to investigate problems. If we allow our undergraduate courses to revert to a "taught" degree, where all that is required is an examination pass which can be achieved by learning lecture notes, it is difficult to see how these additional qualities will be encouraged. This approach is detracting from the student's skill and initiative and only succeeds in diminishing any incentive to learn about engineering.

By returning the emphasis for learning to the students, enthusiasm for the subject will be restored. This is the only way to produce useful and competent engineers, capable of thinking on their own and making effective decisions.

Promoting a professional attitude

One way of promoting career interest is to include more real life examples in the syllabus. This does not have to detract from the academic content of the course: it means relating content to career, so that the students gain a better understanding of the theoretical concepts, instead of seeing them as academic exercises.

More involvement with long-term research projects and increased use of industrial collaborators will encourage career interest. Many students may have specific interests which are not catered for by existing collaborators. These students should be encouraged to form links with new industrial contacts.

Regular seminars by local consulting engineers are essential. The speakers provide a positive role model, encourage professional attitudes and often provide an insight into the human aspects of engineering.

The professional aspect of training plays a vital role in the formation of engineers. Instilling an attitude of pride into students has given the medical and legal professions the status which they now enjoy. This is not impossible with engineering students. The professional engineering bodies always encourage the "professional studies" aspects of engineering degree courses and we need to extend this into an attitude which prevails in both the academic and social sides of the course.

The range of disciplines which an engineer must grasp has grown dramatically with the increasing complexity of materials, products and micro-computing. Graduate engineers are unlikely to begin their careers in a specific job. They are more likely to be responsible for many different areas, some of which will be unfamiliar. No single degree scheme could hope to impart the breadth of experience needed in engineering today.

It is therefore vital that we educate students to be responsible for their own learning, so that the degree educates engineers to be communicators, adaptable, independent and to have initiative. This will more adequately prepare graduates for their career, helping them to deal with the unfamiliar situations with which they will inevitably be faced.

The desire for accreditation of courses has led to universities having to conform to the requirements of the professional bodies which may often embody entrenched orthodoxies. The engineering professions have an enormous role to play in the reformation of engineering degree courses and must strive to move with the times. Unification of the Professional Institutions is a timely move.

Changes in the structure of engineering degree courses are providing us with an opportunity to reassess existing practice and introduce innovative ideas. Methods exist which not only make teaching more efficient, but which can also enhance the understanding of the student. Investment in engineering courses is vital. In modular degree schemes, with the emphasis upon self study rather than lectures, students require more backup in library, computing and laboratory facilities. The future of engineering lies both with industry and universities. With effective co-operation, promotion and consideration, engineering could attain the respect it has long deserved. ❑

References

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Dr Holford and Dr Moore are lecturers in Engineering, School of Engineering, in the University of Wales College of Cardiff.

PERSONAL EXPERIENCE

Being A Student Again

Helen Pennington suggests that all teachers should try being a student from time to time. It would make them better at their job.

THE MOST USEFUL thing I have ever done to improve my teaching has been to become a student again. In the belief that many other teachers could benefit similarly, I would like to make some suggestions and comments based on my experiences over the last fifteen years. During this time I have been an intermittent part-time student in several disciplines while teaching full-time. I have studied internally and by correspondence, at my own university and a British one, at levels ranging from first-year undergraduate (Maori) to MSc (gerontology).

The value of becoming a "real" student is enhanced if you enrol officially, perhaps as a part-time student. I found it best to choose a course in which I was interested, but did not know a lot about. Every part of a course can remind you of something important about the student experience:

○ By doing the assignments and sitting the exam, you can recapture emotions ranging from fear to exhilaration, and be reminded of the stress and dissatisfaction caused by unclear requirements and slow or inadequate feedback.

○ You can learn many things by being a student in interactive sessions such as group discussions. You will experience directly the importance of a supportive class atmosphere, and of courtesies such as having your name remembered. You may be reminded of the value of sometimes telling students why you are putting them into small groups or using other techniques: being explicit about your pedagogic aims can help keep students motivated and prevent resentment of "gimmicks".

○ Student seminar presentations provide their own wealth of good and bad experiences. For instance, by sitting through a number of fellow students' reviews of journal articles, I have learned that these are only valuable to the extent that the student and/or tutor manages to make the article explicitly relevant to the course.

Many teachers will probably laugh hollowly at the idea of finding time to be a student. But even very short student experiences can be useful. Fifty minutes spent near the back of a large crowded lecture theatre, listening to a run-of-the mill presentation, provides a forcible reminder of how physically uncomfortable, claustrophobic and tedious the lecture experience can be, and a glimpse of how gruelling it must be to sit through a whole day of lectures. I often leave a mediocre lecture with a whole set of good resolutions:

○ I will always make the purpose and structure of my lecture clear at the beginning

○ I will try to point out how the lecture is linked with the rest of the course

○ I will recapitulate several times

○ I will make sure that my overheads are clear from the back of the room (an apology for poor overheads is not enough)

○ I will try to change the pace and incorporate some interactive components

○ I will use real life examples and humour whenever I can.

The main gains

Many of the insights to be gained by becoming a student again are not original: they can be found in any text on teaching. There really is no substitute for direct experience, however.

As well as being reminded of the elements of good teaching, you will probably gain greater *empathy* with students:

○ You may appreciate why students often seem to be concerned only with passing the course rather than with really understanding your subject: time is short and surviving the course has to be the first priority. In my student role, I have found myself promising myself that once the exam is over, I will do some real reading and thinking.

○ You will probably be a bit more tolerant of students who whisper during your lectures: they may be asking "what was that bit?" or simply trying to make a long day of classes bearable.

○ You will understand why some students fail to follow your carefully planned administrative procedures: they are bombarded with instructions and information in all their courses, especially in introductory lectures: a momentary lapse of attention can mean missing some vital message.

○ You will appreciate some of the feelings of mature students, particularly the frustrations of the low status student role.

Universities and colleges could help by recognising "being a student" as a valid professional development activity and by waiving course fees for staff and allowing them time to take the occasional course. Staff development personnel could help in co-ordinating visits by staff members to other people's classes. ❏

Helen Pennington is a Lecturer in Psychology at Massey University, Palmerston North, New Zealand.

Leading the Way

Leading Academics.
Robin Middlehurst.
SRHE and Open University Press. 1993. pb. £15.99. hb. £40.00

THIS NEATLY TITLED volume fills a gap in the British literature on the management of higher education. Robin Middlehurst provides a stimulating and gently thought- provoking review of the literature on management, administration and, specifically, leadership, an obviously problematic concept in the academic community which does not easily look kindly on "leaders". The study draws on empirical work in the universities from 1986 to 1991 and does not therefore encompass the former polytechnics, with their somewhat different management traditions and structures.

While the focus is on leaders, these are found at all levels, not just the top, and the book explores the need in contemporary turbulent circumstances for leadership to be widely shared. In uncovering the tensions inherent in academic leadership, Middlehurst provides us with multiple lenses for examining the phenomenon. She also illustrates the need for leaders to straddle and reconcile apparent dichotomies, none more important than that between the centre and the units, departments or other dispersed parts of the modern university. The changed, less hospitable environment of higher education implies also transcending the dichotomy between "transactional leadership" - one step up from from basic organisational competence - and "transformational leadership", not hitherto a well accepted function of academic leadership, but one which rapid and uncertain change increasingly demands in the interest of institutional survival.

Middlehurst does not claim to have written a leadership manual, but as a basis for reflecting on assumptions and experience, it should in fact serve as a very useful aid to the professional development of at least more senior university administrators. ❐

Chris Duke,
University of Warwick

BOOK REVIEWS
Editor: P. T. Knight

Reviewing Reviews

Playback: a guide to reviewing activities
Roger Greenaway
The Duke of Edinburgh's Award, 1993
£7.99

THIS BOOK IS AIMED at anyone who uses activity-based learning in their work with young people. It looks at the reviewing of exercises, presentations, discussions, group dynamics and the like, and although the emphasis is on practical techniques, theoretical aspects are not ignored. In the opening chapters, for instance, readers are told about the value of review-type exercises, the purposes of reviewing and the benefits of reviewing processes in relation to learning and development. The main body of the text comprises a good range of reviewing techniques, together with associated variations. The mixture is innovative and lively; suitable for use by individuals, pairs or groups.

To help facilitators decide on the most appropriate review for a particular activity, the different methods are categorised under five headings: active (drama-based and/or physical); creative (visual, expressive arts); feedback (giving and receiving feedback); verbal (varieties of group discussion); individual (a mainly individual focus). Whilst useful, newcomers to reviewing might have found further guidance concerning the degree of personal risk to participants valuable.

The author's enthusiasm for reviewing loses sight of the idea that some people might be resistant to review processes. More discussion of how to overcome such reluctance would have been welcome. Additionally, I have worries about how time-consuming some of the reviewing exercises seem. It appears not impossible that the high- tech methods, in particular, might well take longer than the activity itself. The same could be said if mid-activity reviewing was also incorporated.

Overall, I feel ambivalent about the book. The question it raises in my mind is what does the author feel is the most important: the event being reviewed, or the reviewing process? I suspect the answer is the latter, and I am not sure how I feel about this. ❐

Hilary Arksey
Lancaster University

Useful Records?

Using Records of Achievement in Higher Education

A. Assiter and E. Shaw, eds.

Kogan Page, 1993, £16.95

TWENTY TWO CHAPTERS occupying 137 pages make for a lot of short pieces and are one reason why the quality of the book is variable.

There are contributions that stand out.

Harrison offers a good account of the use of portfolios for personal and career development within the Open University. It is as tantalising as it is brief.

Wedgewood and Godfrey describe the Sheffield University institution-wide development of Records of Achievement (RoAs) noting that students involved on the pilot study were almost were almost equally divided about their usefulness.

Starr describes a similiar process within a Psychology course, showing how RoAs may be adapted, while Selkirk does likewise with reference to PGCE course. This too was a contribution that cried out for fuller development, not least because of the mention he made of information technology to support the RoAs. Discussions of the use of RoAs for admission to higher education and by employers are also present.

The issues one expects to see discussed are there, mainly, but the reader does have to hunt for them.

Largely unaddressed is the matter of getting colleagues to adopt something that may be seen to increase the demands on their time. Moreover, more is needed on how a student might create a RoA that reflects the whole university experience.

With RoAs, as with other innovations, the impression is that progress is piecemeal, the work of enthusiasts. How might a difference be made? Perhaps the editors will address that in the book on the subject that they are so well placed to write. ☐

P. T. Knight
Lancaster University

Valuing Evaluation

Planning and Conducting Formative Evaluations

Martin Tessmar,

Kogan Page, 1993 £16.95

IT IS THE author's perception that there are no satisfactory textbooks available offering both a theory and a prescription in the formative evaluation. He intends this book for anyone interested in attempting such a formative evaluation and argues that formative evaluation should be an integral part of the in-structional design process. It is, fortunately, not a statistic-laden book nor does it dwell unduly on

historical development of theory. There is sufficient for the practising teacher to put formative evaluation prescriptions into context.

The book consists of six chapters. The first identifies the nature of formative evaluation, the justification for it and an overview of the process. The second addresses the issues to be considered when planning a formative evaluation. Of the last four chapters each in turn examines the conduct of a specific aspect of many formative evaluations: expert review; one-to-one evaluation; small group evaluation; field testing. Each chapter is structured in the same way: an introduction giving a theo-retical overview; a section on planning that aspect of the evaluation; a section on its conduct; and a useful summary. The planning sections offer a wealth of questions for potential evaluators to consider in the development of their evaluation and the sections on conduct give useful suggestions on specific question formulation. In parallel with the text there is a case study of an hypothetical instruction-

al designer undertaking the planning and conduct of her evalua-tion through each of the stages outlined.

How useful is the text? Who might it be for? In my university all new staff are expected to undertake a postgraduate certificate in Teaching Methods. One module of this is concerned with evaluation. We also have a Learning and Teaching Fund (a kind of internal TLTP) and fund holders are expected to plan and conduct an evaluation of their de-velopment work. Many of those fundholders are often unsure where to begin in terms of formative evalu-ation and experience has shown that those undertaking the postgraduate course value texts which are concise and straight to the point. Tessmar has a straightforward, relaxed, writing style and, at a hundred and fifty three pages, the text would well meet the requirements of both these groups of staff and I will be recom-mending it to them. ☐

Douglas Edgar
Glasgow Caledonian University

Dated Handbook

Handbook of Educational Technology (3rd Edition)

Henry Ellington, Fred Percival, Phil Race

Kogan Page, 1993, £16.95

THIS BOOK PURPORTS to serve both current educators and those in training. The danger is, of course, that it serves neither very well, and it certainly falls short of the "invaluable" label given to it on the back cover.

Twenty per cent of the book is a glossary of terms, which includes 'microphone', 'mouse', 'task' and (television) 'monitor'. With the pace of developments in Educational Technology, it is difficult to know when to leave things in or out, but the authors could certainly have been less conservative in their judgements.

There are a number of photographs and diagrams but they look decidedly dated and again, I question their selections. Do we really need a photograph of "A typical lecture in progress"? In summary, I think all I can say is that "times have moved on" and this book hasn't. Updated, yes. But the field of Educational Technology needs a new kind of book, reflecting the vitality of the work being done. When it is stated that the "OHP is probably the most versatile visual aid that can be used to support mass instruction methods" it suggests that the authors are unaware of the power of computer-aided learning. ❏

Graham Rawlinson
Enterprise Team, University of Surrey

COMMENT

Assessment as Tyranny

IT IS THE MODE of assessment that has imposed what A. Tate calls the "tyranny of content" *(New Academic*, I,1), skews the curriculum and determines the "hidden" one that students follow. The mode of assessment also exposes the values and expectations about teaching, learning, knowledge and education that the institution actually, but perhaps unwittingly, fosters.

Assessment methods that demand recall and reproduction of factual knowledge impose on both lecturers and students: lecturers teach to the assessments and are concerned that they may not have covered all the content; perceptive students adapt their learning strategies and those who normally use a deep approach to learning will shift to a surface approach. This is not to imply that testing factual knowledge is to be despised or that it should be excluded. Rather, it should not be the sole method.

Some potentially liberating changes are being made in assessment but concerns are evident. Verran et al *(New Academic*, II, 2) write of a distrust of assessment of group work amongst staff and students. They admit that their assessment criteria were initially vague and that staff were "relatively inexperienced at assessing both group work and the quality (as well as the content) of a product of negotiated nature". Roworth-Stokes *(New Academic*, I,3) views the student-learning contract "with considerable concern" and fears that giving students the authority to direct their own programmes and the power to devise appropriate assessment criteria is a possible recipe for disaster. However, he has apparently gained confidence from the experience of writing his own learning contract and evidently has some control over assessment policies.

The real problem is that staff are being required to render all assessments down into that "educational enigma - the all-talking, all-singing, all-dancing uni-dimensional grade" (Rowntree, 1977). Malseed *(New Academic*, II,1) reports her students' questioning the value of grades and saying that "without marks you'd be more likely to concentrate on your development".

Another relevant comment comes from David Boud *(New Academic*, I, 1) who discusses high-fliers failing to make a successful transition into independent research. A "uni-dimensional grade" based on written examinations, shown to assess conforming responses, does not do justice to either the individual student or the aims of HE.

What is required is that assessment should produce a comprehensive personal profile for each student rather than the "uni-dimensional grade". The aims of a liberal education are severely undermined by the tyranny of content and a shift from teacher-centredness to student-centredness is needed. But this shift cannot be made by a change in teaching methods alone. I am arguing that lecturers are hindered in their innovations by inappropriate assessment policies. ❏

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Reference

Rowntree,D. (1977), **Assessing Students: How Shall We Know Them?** London; Harper Row

DIARY

March 10th -11th, *Residential expert seminar on Learning contracts.* Higher Education for Capability, The Parkway Hotel, Leeds. Tel: 0532 347725

March 16th, *A working conference on Using Resource-Based Learning to develop student capability.* Higher Education for Capability in association with the University of Sunderland Washington Conference Centre, Washington, Nr Sunderland. Tel: 0532 347725

March 17th & 18th *Learning in Teams.* The Oxford Centre for Staff Development, University of Warwick, Coventry. Nadia Delfino, Oxford Brookes University. Tel: 0865 750918

March 22nd & 23rd *Teaching and Assessing on Modular Courses.* The Oxford Centre for Staff Development, Rewley House, University of Oxford. Nadia Delfino, Oxford Brookes University. Tel: 0865 750918

March 23rd - 24th *Making Committees and Meetings Work.* De Montfort University Leicester Tel: 0533 577804

March 24th - 25th *Residential expert seminar on Modularity.* Higher Education for Capability. The Parkway Hotel, Leeds. Tel: 0532 347725

April 11th - 13th *Computer Assisted and Open Access Education.* Napier University Tel: 031 455 4306

April 13th, 14th & 15th *Developing Teaching in Higher Education.* The Oxford Centre for Staff Development, at Lancaster University. Nadia Delfino, Oxford Brookes University. Tel: 0865 750918

April 21st - 22nd *Residential expert seminar Group-based Learning.* Higher Education for Capability. The Parkway Hotel, Leeds. Tel: 0532 347725

May 5th - 6th *Residential expert seminar on Assessment.* Higher Education for Capability The Parkway Hotel, Leeds. Tel: 0532 347725

May 11th - 12th *Effective Marketing Communications: Getting Your Message Across.* De Montfort University Tel: 0533 577804

May 11th - 13th *Small Group Teaching.* Centre for Higher Education Studies Tel: 071 612 6383/63362

May 9th-13th *Consulting Skills for Internal Advisors.* Residential Workshop. Runnings Park, West Malvern. Write to SEDA Administrator, Gala House, 3 Raglan Road, Edgbaston, Birmingham B5 7RA.

May 16th - 18th *Assessment for Learning in Higher Education.* SEDA Conference, MOTEC Conference Centre, Telford. To register, write to SEDA Administrator, Gala House, 3 Raglan Road, Edgbaston, Birmingham B5 7RA.

May 16th *SEDA A.G.M.* MOTEC Conference Centre, Telford. 8.30pm.

May 19th - 20th *Research Supervision.* Centre for Higher Education Studies Tel: 071 612 6383/63362

May 26th & 27th *Profiling,* The Oxford Centre for Staff Development, University of

Warwick, Coventry. Nadia Delfino, Oxford Brookes University. Tel: 0865 750918

June 8th - 9th *Challenging Perceptions: Disability, Equality and the Arts.* De Montfort University Leicester Tel: 0533 577804

June 15th & 16th *Observing & Appraising Teaching.* The Oxford Centre for Staff Development, University of Warwick, Coventry. Nadia Delfino, Oxford Brookes University. Tel: 0865 750918

June 22nd & 23rd *Coping with Student Diversity.* The Oxford Centre for Staff Development, Keele University. Nadia Delfino, Oxford Brookes University. Tel; 0865 750918

July 4th *Innovations in Science Teaching.* The Oxford Centre for Staff Development, Rutland Hotel, Nottingham. Nadia Delfino, Oxford Brookes University, Tel: 0865 750918

November 9th - 12th *A Global Conversation About Learning: Exploration - Reflection - Action.* The Washington Hilton and Towers, Washington, DC, USA. The 1994 International Experimental Learning Conference,223 West Jackson Boulevard, Suite 510, Chicago, Illinois 60606 ❒

Editorial Support

The New Academic offers a new service to readers who want to improve their hit rate in the publishing game.

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Programme for the SEDA Conference on Assessment: 16th to 18th May 1994

Day 1: 16th		Day 2: 17th			
1pm	Welcome	9.00	Assessment simulation	7.30	SEDA event. Sherry reception for new members
1.00	Introductory exercise	11.00	Coffee	8.00	Conference dinner
2.00	Workshops	11.30	Keynote address - Madeleine Atkins		
3.30	Tea				
4.00	Keynote address - David Boud	12.30	Lunch		**Day 3: 18th**
		1.30	Study Groups		
5.00	Study Groups	3.00	Tea	9.00	Workshops
7.30	Dinner	3.30	Workshops	10.30	Coffee
8.30	SEDA AGM	5.15	SEDA event. Accreditation scheme launch	11.00	Study Group
				12.00	Drawing together

ASSESSMENT AND CHANGE

SEDA Annual Conference
16 to 18 May 1994

SEDA — STAFF AND EDUCATIONAL DEVELOPMENT ASSOCIATION

at the MOTEC Conference Centre, Telford, Shropshire.

Assessment for Learning:
Responding to and Initiating Change

Keynote Speakers:
- ○ Professor David Boud, University of Technology, Sydney.
- ○ Dr Madeleine Atkins, University of Newcastle upon Tyne

Participative planning sessions
led by
- Professsor Phil Race
- Diana Eastcott
- Bob Farmer

Workshop themes:
- ○ Assessment for learning
- ○ Current influences on assessment practice
- ○ Standards
- ○ Assessment methods

The conference will take place in a purpose-built centre, with sports facilities, indoor swimming pool and sauna.

Booking forms from SEDA Administration, Gala House, 3 Raglan Road, Edgbaston, Birmingham B5 7RA.

Conference organiser: Sue Drew, Learning and Teaching Institute, Sheffield Hallam University, Sheffield S10 2B. tel: 0742-532219