The Joy of Prizes

Presented by members of ERGA

Prizes

1. Faculty teaching prizes
   - HS 31 March
   - ECMS, HUMSS May
2. Stephen Cole the Elder prize (Sept 11)
   - Vice chancellors award
3. ALTC Citation
   - May 1 (Citations)
   - July 10 (Programs that enhance learning)
   - July 10 (Teaching Excellence)

- Natural progression, although not essential to have 1.

Stephen Cole

- 11 page written statement, including an overview and an argument addressing each of the five selection criteria [http://webdev.adelaide.edu.au/dvca/grants/ua/sce.html]
- Two one page references
- 4 page CV
- Student feedback received within the previous three years. Feedback will come from SELTs and can be supplemented from other feedback mechanisms put in place by the nominee. It may be either quantitative or qualitative or both.
- Must be nominated (one must be a student)

Stephen Cole

- Approaches to teaching that influence, motivate and inspire students to learn
- Development of curricula and resources that reflect a command of the field
- Approaches to assessment and feedback that foster independent learning
- Respect and support for the development of students as individuals
- Scholarly activities that have influenced and enhanced learning and teaching

ALTC

- Send in an expression of interest to University (2 pages). They decide candidates
- 10 nominations usually sent each year
- High success rate
- 4 pages to ALTC
- Need referees who know your work and will say something lovely

Stephen Cole

- Date 15/08/07
  - Sufficient content
  - One authors comment “from my brief perusal of previous SC winners, it seems there are two distinct approaches.
    - A), I am the greatest and just look at these wonderful SELT reports or
    - B) a more measured, ‘scientific’ approach. I think we are probably the latter
- Not the correct decision
- One other HUGE problem

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Stephen Cole

- 31/08/07
- All material tied together in a lovely journal type presentation. All the evidence was there. Very publishable work
- No chance of getting the prize
- Enter the BEAST!

The Beast

Stephen Cole

- Joy McEntee
  - Past winner
- Worst mistake…"Joy, would you mind looking at this"
- Best decision…"Joy, would you mind looking at this"

Stephen Cole

- Progress at a glance-over 1 week
  - 67% of 'finished' document with track changes or "helpful" comments

A way of thinking

My initial approach…

- Background to gently introduce the topic .
- Buried somewhere in the middle (possibly where people have stopped reading!) my contribution.
- Some discussion of impact.

... replaced with …

- What have I done and why is it good.
- Background to justify it, how it fits into what others do, and descriptions/examples to make it real.
- Impact - what students think, what their performance is, grants, pubs, etc.
- Where to next – wider impact.

Example

ALTC

- Your citation could be something like: For the development of innovative learning and teaching programs using online technology.....Something much sexier, but you get the idea.
- From Peter Devitt “This looks good. Can we employ Barbara to do PR for us? “

Original document

Overview

The gradual relaxation of the maths entry requirements for undergraduates to engineering courses, combined with a reduction in the maths content in the second and third years of the degree and a desire to enhance the student experience by allowing much greater flexibility in the selection of courses undertaken has meant that students in recent years have been less experienced, less skilled, less available for formal sessions, and less interested in what were always regarded as difficult subjects – mathematics, and its application to engineering. At the same time the importance of computers in an engineer's working life has increased significantly and there could be few students nowadays who, deep down, do not believe that they will do much of their engineering analysis using a computer.

These realities lead to two key issues for engineering educators: a need to have students learn and be comfortable with high level mathematics, and a need to have students who are able to apply what mathematics they have learned to realistic engineering problems using computers. The fact that the methods must often be programmed using a formal computing language (e.g. Fortran, Pascal or C++) adds considerably to the difficulty since computing requires a particular way of addressing a problem, and often requires considerably more time, reflection, and practice than students appreciate. The nature of computer programming makes it difficult to teach in a traditional lecture: there are fewer moments of sudden enlightenment when a principle is grasped for the first time or a range of topics suddenly connect. More often it is about gradually retraining the mind to think in a quite artificial way and gradually accumulating the methods by which tasks are tackled. One option for teaching is to give students the basics and then to allow them to develop their skills (with appropriate feedback) through a series of selected problems where they can exercise self-directed learning.

After editing

2 OVERVIEW

The gradual relaxation of the maths entry requirements for applicants to engineering courses, combined with a reduction in the maths content in the second and third years of the degree itself and a desire to enhance the student experience by allowing much greater flexibility in the selection of courses have meant that undergraduate students enrolled in engineering over the last decade have on the whole been less experienced, less skilled, and less interested in and committed to mastering what were always regarded as difficult *subjects* – mathematics, and *its* application to engineering. Moreover, the importance of computers in an engineer's working life has increased significantly and there appear to be few students studying engineering who, deep down, do not believe that they will do much of their engineering analysis using a computer, rendering manual computation largely unnecessary.

It is only a small exaggeration to say that it sometimes comes as shock to students (along with many others in the wider world) that computers can only do what they are told to do by a computer program and are not 'thinking' entities capable of working problems out for themselves. The fact that the methods for handling engineering problems and calculations must often be programmed by the engineer personally, using a formal computing language, such as Fortran, Pascal or C++, (Figure 1) introduces an unexpected dimension to an already difficult situation for students just coming to grips with sophisticated mathematical and problem solving techniques. Moreover, computing that involves writing one's own programs requires a very particular way of addressing problems, and often requires considerably more time, reflection, and practice than students initially appreciate. Learning computer programming is about gradually retraining the mind to think in new, and often quite artificial ways, and about gradually accumulating the methods by which engineering design and computer-assisted problem solving can be tackled.

$$s = \sqrt{\frac{1}{n-1}\sum (x - m)^2}$$

```
sum2 = 0.0
  do i = 1,n
    sum2=sum2+(x(i)-mean)**2.0
  end do
  stdv = sqrt(sum2/real(n-1))
```

Figure 1 A mathematical definition and the Fortran code to evaluate it

In addition to the problems that students face with numerical analysis there are further issues that come from increasing class sizes that reduce the scope for one-to-one teaching, but at the same time do provide opportunities for those willing to promote change. The courses that I teach on a regular basis include Engineering Planning and Design (a general introduction to engineering), to over 300 students, Engineering Modelling and Analysis (a third year course covering numerical and computer methods), to 100 students, and a fourth year/masters level coastal engineering elective to 40 students.

All prizes

- Tell a story
- Include yourself in the story
- Don't write a journal article
- Pretend it's about someone else you're impressed by & warm & fuzzy about.

Joy's lessons: How *not* to use evidence

- Long list of student quotes without context
- Long list of generally impressive attributes (CV)

- Not necessarily impressive:
- Develop a coherent 'story':
  - Evidence of your application of your philosophical approach
  - Draw inferences
  - Spell out implications (impact)
  - Also let the application reflect your style: what *do* students see in you…

Let the application reflect your *style*

Why do students kindle to you?

Joy's Lectures:

- Characteristically informative AND wryly funny

ALTC application started with two Bierce quotes:

"Freshman, *n.* A student acquainted with grief."

"Lecturer, *n.* One with his hand in your pocket,
his tongue in your ear and his faith in your patience."

But these weren't just throw-away lines…

Tell a consistent story

Joy's philosophy:

- Uni can be hard, but learning is fun
- Take every opportunity to laugh (including at yourself)
- An acute sense of humour bespeaks a lively critical faculty

Joy's citation:

"for modelling an "infectious enthusiasm" for learning and teaching as stimulating and emotionally rewarding experiences, inspiring both learners and teachers over a 10-year period.

Joy's overview:

"Joy McEntee's distinctive contribution as a tertiary teacher is her emphasis on acknowledging the emotional dimensions of adult learning: on making learning fun, on making it safe, on making it exciting, on acknowledging that it occasionally involves risk and pain, but that recovery is possible, on making learning seem like something that is possible, and indeed desirable, to pursue life long."

Demonstrate your impact over time

- Joy's gig
  - 'holistic' approach to students as learners
- Vignette:
  - Student I called when she was in 2nd year, and about to drop out.
  - Later wrote to me after she completed 1st class Honours, when she entered PhD
  - Said how much that call meant.
  - Now has doctorate.

Stuff

Stephen Cole

- Edward's flair for designing highly interactive and educationally relevant software has led to collaboration with with Dr Daniel Cehic, Consultant Cardiologist at the Royal Adelaide Hospital. Together we have developed Voltaire, a computer-based formative assessment tool. Our students, cardiologists and general practitioners as well as specialist health services such as the Royal Flying Doctor Service make use of this product. The work involved in Medici and Voltaire resulted in one of the applicants, Edward, being nominated for the Apple University Consortium (AUC) Best Practice in Innovation in Teaching Award 2005.
- Pretend it's about someone else you're impressed by & warm & fuzzy about.
- Gush!

Stephen Cole

- "Recent changes in the delivery of health care has necessitated changes in the style of undergraduate medical education. With the current emphasis on 'health in the home' and reduced stay in hospital, together with minimally invasive technology, the opportunities to involve students in patient-focussed teaching have reduced. We have addressed such issues in a number of different ways"
- Like a journal article…not a good idea

Stephen Cole

- We have a major commitment to teaching, derive much pleasure from watching others succeed and enjoy the challenge of providing a stimulating environment for our students. We use our enthusiasm and well-developed teaching skills to enhance the learning opportunities for our students. We are flexible in our methods of assessment, and firm in our belief that any assessment method must be based on sound educational principles, undertaken in the light of current literature, tested and improved.

Stephen Cole

- we have paid particular attention to the formal evaluation of all our work. This has included:
  - Measurement of the effectiveness of different styles of learning (tutorials, PBL)
  - Provision of electronic case studies as a stimulus to further learning (ophth)
  - Effectiveness of electronic materials in understanding of electrocardiography
- Lack of flow…not a good idea

Stephen Cole

- We believe an evidence-based approach to learning and teaching is the best option for providing good outcomes for our students and promoting sound and credible teaching methodologies to the educational community. Our approach to teaching has been particularly influenced scholarly literature on assessment methodologies, interactive approaches to teaching and learning and the role of technology in education. This approach has been noted in the peer review of Edward's teaching where the reviewers noted "Edward has developed clear positions on teaching and learning, which are informed by literature."
- Support statements with evidence