Call for discussion on exam scrutiny process

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October 12, 2015

Over recent years I have become more aware of things I perceive as problems with our exam scrutiny process. This has been reinforced by my experiences as external examiner in other places (currently St Andrews) that seem to manage the equivalent process better. I’d like us to discuss whether we can improve our own processes, and if so, how.

Summary of current process

1. Lecturer writes exam and marking scheme.
2. Lecturer uploads these to exam PC
3. Large group of people (e.g. all lecturers of courses in a given year) is invited to scrutiny meeting
4. ITO prints out papers and takes them to scrutiny meeting
5. Smaller, but still rather large, group of people turns up to scrutiny meeting
6. We aim to get two lecturers to read and comment on each paper.
7. Lecturer goes to ITO to read and act on comments.
8. Paper goes to external examiner [etc.]

Perceived advantages and disadvantages

+ In theory, the fixed scrutiny meeting acts as a deadline by which even the most dilatory lecturer will have written their paper.
– In practice, several to many papers are always missing from the scrutiny meeting.
+ In theory, all papers get thoroughly scrutinised.
− In practice, most (scrutineer, paper) pairs involve a paper being scrutinised by someone who couldn’t (without some work!) get a first class mark in the paper. Contributing factors to this include:

  • the wide range of papers at each meeting, across Informatics;
  • the concurrent nature of the meeting: you pick as your next paper to scrutinise a paper which is free, and there usually aren’t many at a given moment;
  • the distribution of lecturers across years, which does not maximise, in fact almost *minimises*, the chance that the best person to scrutinise your paper is at the meeting where it is scrutinised; they’re more likely to attend a different year’s scrutiny meeting, where the course they’re teaching, which is in a prerequisite relationship with yours, is.

The result is that the meeting ends up much better at nitpicking wording than at finding substantive errors (and no, this is not because there never are substantive errors...).

+ In theory, the job of scrutinising papers is evenly spread.

− In practice, there are people who always turn up to scrutiny meetings and people who never do.

+ For those who turn up, the scrutiny meeting provides a valuable opportunity to see the kinds of questions that are set at a given level. In theory, one could do this by looking at published papers, but that’s a “pull” mechanism: one would have to get round to it, whereas a scrutiny meeting you’re going to anyway gives you that overview automatically.

− The process does not (attempt to) identify a member of staff who could mark each paper in the event that the lecturer were unable to do so.

**Variants we might consider**

1. Even bigger meetings, e.g. scrutinising all upcoming papers for all years, perhaps running over a whole day (a room is booked, we commit a person to be there all day, lecturers drop in when free to scrutinise the 4-ish papers they’re best able to scrutinise). This would increase the chance that the (scrutineer, paper) pairs match better, and that a given lecturer has no excuse for not contributing. But practically it needs a room for a long time and a supervising person, which is expensive; I fear that in practice it would make it easier for some people to opt out (because if there’s never a time when everyone is there, doing so is less visible). Personally I don’t much like this one.
2. Much smaller, perhaps virtual, meetings, of the lecturer and one other person, chosen to be a suitable expert to scrutinise the paper. That person signs off the paper having read it carefully, and is considered to be the go-to person to mark the paper should the lecturer be unavailable. Optionally, also have a second such meeting with a pseudo-randomly selected person, aimed at catching wording likely to confuse a non-expert, and to provide a third pair of eyes to catch typos. I am told this is “the old AI model”; it’s also, I think, approximately what St Andrews do now. It does risk losing oversight of what “a typical Edinburgh UG3 paper” looks like. Nevertheless I tend to favour this option: it seems likely to give better scrutiny at lower cost than we have now.

A point that would need attention: security of the papers. Currently most lecturers prepare scripts on their own machines and take them on USB sticks to the ITO, so it is not the case at present that papers are never held outside the ITO; but perhaps the smaller meetings would increase the temptation to email unsat papers around, which should not be allowed to happen.

More radical options

1. Don’t do scrutiny at Edinburgh at all; leave it to the external examiner to find problems. This has been the model somewhere else I’ve been external examiner. It was not disastrous. Risk homeostasis is our friend here, I think.

2. Adopt the second variant above, and go a step further (probably only in selected courses): swap the roles of the lecturer and the expert scrutineer in regard of the exam paper (for setting, for marking, or both). This is “the old Cambridge maths model”. Its advantages include that it may increase assurance that the whole of a course has been taught to equal depth, and that it encourages a form of workload sharing that might be pragmatically useful. (For example, a few of us have got good at setting and marking large cohort programming exams efficiently. But we don’t want to teach those courses in perpetuity...separating the teaching and the assessment might make it easier to find people for both.) For as long as the lecturer hasn’t seen the paper, the lecturer’s interests and the students’ are unproblematically aligned: the lecturer can speculate freely with the students about what questions might be asked, for example. (But we probably do need the lecturer to see the paper, and have a chance to ask for amendments, before it goes to the external, because our official paperwork is a loose specification of the course only, so this advantage probably cannot be maintained throughout the course.)

Thoughts?