How to be a good intercollegiate class TA

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Introductions

And you…
- UK?
  - Oxford?
- US?
- Europe? Other parts of the world?
- Maths? Stats? Other departments?
- Teaching experience?

Why are you here this afternoon?

- Teaching is useful training for a range of careers
- It’s part of Institute and Department life
- You meet the undergraduates and (more) staff
- It’s (usually) interesting and fun
- You get paid
- …and your contributions are needed!

Programme for today

See also separate handout in pack
- Introduction to Maths & Stats teaching in Oxford
- The role of the TA (you!)
- Effective marking
- Leading the discussion of a question
- Developing as a teacher
What does effective teaching look like?

• Three things I found useful
• Three things I did not find useful

*Discuss (6 minutes) in small groups and report back*

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The Oxford mathematics and statistics courses

Aim: by the end of the course (3 or 4 years) the students should be independent learners

Strategy: early individual support, later growing independence
The Oxford mathematics and statistics courses – the students

- High achieving and motivated
- Top grades at school
- Diverse – in abilities, in background, in needs

The Oxford mathematics and statistics courses

Mathematics
Mathematics and Computer Science
Mathematics and Philosophy
Mathematics and Statistics
- All in two versions: 3 year BA or 4 year MMath
Mathematical and Theoretical Physics (4th year only)
OMMS (runs alongside 4th year Part C)

The Oxford mathematics and statistics courses

- 1st/2nd year (Prelims/Part A): 4 terms core then limited options
- 3rd year (Part B): done by all
- 4th year (Part C): approx 60% of students continue, they need an upper second, and are joined by OMMS students who’ve studied elsewhere
- In the 3rd & 4th years specialised options are supported by intercollegiate classes
The Oxford mathematics and statistics courses

3rd and 4th years:
- 2 terms of lectures and classes
- Students generally take 8 courses per year, ideally 4 per term
- 1 term of revision
- Annual summative assessment

Assessment is usually not in hands of teachers…
In 3rd and 4th years:
- Mainly 1.75 hour written paper per course, but also
  - Mini projects
  - Dissertations and Essays

Problems sheets for classes do not contribute

Intercollegiate classes
Intercollegiate classes

A typical intercollegiate class will
- be one of four classes for the course and last 90 minutes (sometimes 6 x 60 minutes)
- have a tutor and TA present throughout
- have between 8 and 12 students
- focus on one problems sheet and associated lecture material.

Intercollegiate classes – team teaching

Course lecturer
- gives the lectures (16 hours per course)
- provides problems sheets (usually 4 per course)
- supplies specimen solutions to tutors and TAs
- coordinates classes (6 hours per course)
- sets and marks end-of-year exam or other assessment

Students
- work on material and hand in solutions in advance of class
- participate actively in classes
Intercollegiate classes – team teaching

Class tutors
- take overall responsibility for their classes
- plan classes
- take classes
- write end-of-term reports
- mentor TAs in the training scheme

Teaching Assistants
- mark work (comments and grades)
- help to plan classes
- help with classes (including leading discussion of some problems)
- after each class enter marks/attendance on Minerva database
- advise tutor on end-of-term reports

The role of the TA – a little more detail
- Students hand in work, TA marks it before class
- Pre-class meeting ~15 mins
  - TA & class tutor, to plan the class.
  - TA provides mark sheet
- First class meeting – introductions
- Return work – give students a chance to read comments
- Take the register
The role of the TA – a little more detail

- TA assists with class and should lead discussion of at least one problem
- Time for individual queries about marking (probably at end of class)
- Try to send students away feeling positive – challenged but making progress
- Promptly after the class, TA enters marks and attendance on Minerva

The role of the TA – lots more detail

Please (later!) read the TA job description – it’s in your pack and on the website

The role of the TA - Minerva

Promptly after each class
- record marks on Minerva
- record attendance on Minerva

At the end of term
- advise tutor on end-of-term reports
(See screenshot in your pack)
Some scenarios

See handout in your pack.
Please discuss your allocated scenario in a small group.
Please choose one or more other scenarios to discuss with your group.

Any questions?

Tea break

In the South Mezzanine
until 3.15pm!
Why do we mark students’ work?

Some reasons why formative assessment is useful:
• to support students’ learning
• to help students to see their progress and to see where they need focus
• to assess students’ progress for colleges

Marking is an integral part of teaching, not separate.

What feedback is helpful for students?
• Be fair, honest and kind
• Be specific
• Try to give feedback that will help the student in the future
• No need to edit
• Offer constructive feedback on presentation/clarity
• Don’t make assumptions
What feedback is helpful for students?

• If you find an error, explain briefly. If you can easily think of one, give a hint or counterexample.
• Be positive, encouraging and constructive
• Praise good ideas and acknowledge effort
• Try to help the students feel that they are making progress
• Say if something is particularly elegant or inventive
• Say if an argument is going in a positive direction

Practical points

• Agree a sensible deadline for work with the tutor
• Give comments, not just grades
• Give an overall grade for each piece of work, and put it on the top of the student’s work (see job description)
• Talk to the tutor about when/how they would like to plan the class
• Keep a record of grades, to put on Minerva

Before you start marking

• Prepare the questions thoroughly before marking – try them yourself to find the subtleties
• Consider writing out some solutions, especially ones for questions you’ll lead on
• Review the lecturer’s solutions to see what the lecturer intended
How long should you spend marking?

For a 90 minute class:
Rough estimate 1-2 hours preparation, plus 20-30 minutes per student
But it will depend on
• your familiarity with the course
• your experience of marking
• how long the sheet is
• the particular group of students

Try to do a decent job within this time frame, it should not take much longer.
If you are taking more than 45 minutes per script then ask for advice (class tutor, faculty teaching advisor, …).
Important to help the student, but find a balance with time taken.
No need to mark optional MSc questions.

For example
• Unclear proofs: show how to improve explanation (don’t have to try to divine student’s intentions)
• You can put ‘see class’ if problem will be covered in class
• No need to locate/fix careless errors (if they really are careless)
Marking – some practice

Assume this is for a class in which the problem will be covered.

• Mark the specimen answers yourself
• Discuss in small groups
• Report back (after 15 minutes)

Leading the discussion on a question

• Agree with the tutor before the class which question(s) you will do
• Plan! Plan for this specific group of students
• Do you need to review lecture material in class?
• What are the important points? What needs to be written and what needs to be said?
• Is there a diagram or example that would help?

Leading the discussion on a question

• Put the question in context
• Give general principles and techniques
• How will you involve and engage students?
• Use same notation and approach as lecturer
• Write clearly, think about when to erase
• Try to look at the students, not only at the board
Leading the discussion on a question

- Speak loudly enough
- Pause
- Look at the students to judge pacing
- Think about whether you need notes
- What can you add that will help the students?

Other contributions to the class

- Talk to the tutor about how you will be involved in the class
- Sometimes helpful to add comments, eg “I remember that several people found this question difficult”, or “There’s another lovely solution that someone found”
- Be sensitive about identifying individuals
- The tutor has overall responsibility

Developing as a teacher

- Ask for feedback from the tutor
- Use the tutor as your mentor – a five-minute discussion after the class can be helpful
- Pick one thing to work on each time
How you get feedback

- While you’re in the TA training programme, the tutor will write a report at the end of term
- Students fill in a paper questionnaire in the last class of term
- The relevant student feedback is shared with you
- If you have any queries, you can contact the faculty teaching advisor

TA training programme

Stage 1: Preparation for Learning & Teaching at Oxford
- Training session (this one today!)
- Two successful terms as a TA

If you complete Stage 1 then you will receive a letter confirming this, and can apply to be a class tutor

TA training programme

TA debrief with faculty teaching advisor at start of Hilary Term

Other departmental training sessions:
- Tutorial teaching
- Class tutor
Any questions?

Before you go…

Please spend a couple of minutes filling in the feedback form (in your pack) – this helps us to plan the sessions.

Please come and talk to us individually if you have any questions.

Good luck!

Enjoy your teaching!