

Tutorials and marking

Now with 25% less cynicism

David Pritchard and Tom Leinster

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Why should I be interested in teaching?

If you can get involved in teaching, you should!

In ascending order of importance...

- ▶ It provides useful additional **income**.
- ▶ It's valuable experience for your future **career**.
- ▶ It can be one of the most **rewarding** activities there is.

What do we mean by tutorials?

Terminology varies between universities.

- ▶ **Example classes:** like mini-lectures, working through set problems on the board.
- ▶ **Marking tutorials / supervisions:** providing feedback on submitted homework.
- ▶ **Walk-round tutorials / labs:** students tackle problems in class and ask for help.

Tutorials may contain elements of more than one of these.

Some possible purposes for a tutorial

- ▶ Provide students with **formative feedback**:
 - ▶ on their understanding of concepts;
 - ▶ on how they're doing relative to expected standards.
- ▶ Give students the opportunity to:
 - ▶ **practise** applying ideas introduced in lectures;
 - ▶ ask **questions** and take responsibility for their learning;
 - ▶ **learn from each other** (successes and failures).
- ▶ Illustrate **how an expert thinks** through a problem.
- ▶ Build students' **confidence** — not always monotonically!
- ▶ Find out about the students:
 - ▶ their **expectations** and **prior knowledge**;
 - ▶ what they're finding difficult or easy.

Planning and choreography

A few suggestions for staying on top of things.

- ▶ Get **clear instructions** from the lecturer.
- ▶ Check out the room and the class in advance:
 - ▶ **boards**, lighting, ventilation, acoustics...
 - ▶ numbers; degree course; **special requirements**...
- ▶ Write **your own solutions** and slides
(but check they're consistent with the lecture notes).
- ▶ Arrive early. Start on time. Finish early rather than late.

In the classroom: speaking

When you're actually talking...

- ▶ Face the audience where possible; make eye contact.
- ▶ **Project** your voice; **vary** pace, volume and tone.
- ▶ Do maths **live** — don't just reproduce the solutions.

Are they still following you?

- ▶ Be aware of your audience, but don't over-react.
 - ▶ Concentration can look like boredom.
 - ▶ Don't become hostage to the weakest students!
- ▶ Ask and invite **questions**.
- ▶ **Silence** can often pull attention back.

In the classroom: asking and answering questions

Good questions get students to participate.

- ▶ Do you want questions to:
 - ▶ make the class **fun** or **challenging**?
 - ▶ give the students **something to ponder** later?
- ▶ More **specific** questions get better answers.

Think carefully about how to answer students' questions.

- ▶ Some good responses to a sensible question:
 - ▶ go through a **similar example**;
 - ▶ **Socratic** questioning;
 - ▶ admit you need time to think about it.
- ▶ Some traps to avoid:
 - ▶ **doing the work** for them;
 - ▶ sounding **patronising** ('clearly', 'trivially', etc...);
 - ▶ treating **very stupid questions** with contempt.

In the classroom: teaching style

“Teach the students you have, not the ones you want”
— but don't let them pull your expectations down.

- ▶ If students are struggling, you may need to:
 - ▶ **commiserate** (but be clear they can succeed in time);
 - ▶ **explain** (possibly several times in different ways);
 - ▶ take a **step back** and look for the root of the problem;
 - ▶ be **patient** and save your **frustration** for later.
- ▶ Watch out for the quiet strugglers in a large class.
- ▶ If students are doing well, you may need to:
 - ▶ **praise** them (but beware of establishing favourites);
 - ▶ **challenge** them with something extra.
- ▶ Try not to reinforce a smart-versus-stupid mindset.
- ▶ Beware of **unconscious bias**.

Students will rapidly pick up whether or not you **care**.

In the classroom: coping with problems

Most successful classroom management relies on:

- ▶ clear **ground-rules**, enforced **consistently**;
- ▶ making sure you set a **good example**;
- ▶ **back-up** from the lecturer in charge and the department.

If students misbehave:

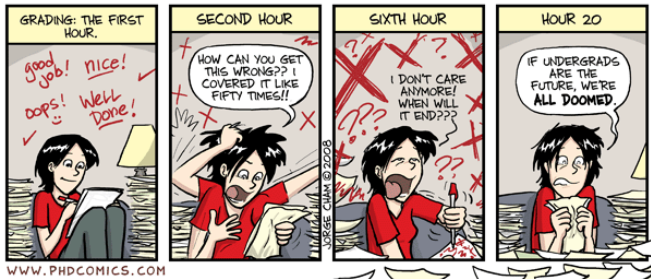
- ▶ **address individuals** and get the class behind you;
- ▶ be **polite** but not hesitant;
- ▶ if you issue a **warning**, always follow it through.

When you make a **mistake** in your own working:

- ▶ **acknowledge** this and **correct** it;
- ▶ use it as a chance to teach **self-correction**.

Don't panic... and don't take things personally!

Marking work



[Cartoon by Jorge Cham, phdcomics.com.]

Marking: general principles

All feedback should help students to **improve**.

- ▶ Make clear on each script:
 - ▶ what they've got right and wrong (use **ticks** and **crosses** to indicate this);
 - ▶ what they should focus on next time (use **written comments**, perhaps beside the grade).
- ▶ Marking in **red pen** is fine.
- ▶ Give summary **grades** or marks iff you have to.
 - ▶ Grades often displace all other feedback.
 - ▶ Tell students what their grades mean (if anything).
 - ▶ Deal with **complaints** courteously and individually.
- ▶ Avoid the temptation to write anything rude.

Marking: an exercise for you

On the handout you have two students' attempts at a first-year maths question.

The correct answer is $x_1 = -1$ and $x_2 = 4$.

Stage 1. Mark each of the attempts (without consulting) in the range 0–9, and record the mark.

Stage 2. Now mark each of the attempts using the marking scheme, and record the mark.

Marking: partial credit

Partial credit is always subjective.

- ▶ If **consistency** is important, the lecturer should provide instructions and/or a detailed marking scheme.
- ▶ If an error is **carried through** consistently then
 - ▶ try not to penalise the student more than once...
 - ▶ ... unless it makes the rest of the question easier!
- ▶ If the question specifies the **method** that should be used, don't give credit to answers that use a different method
- ▶ If the question doesn't specify the method that should be used, give full marks for any valid method.
- ▶ Be very careful marking **'show that' questions** in which the answer is given.

Marking: ethical issues

As a marker you are in a position of trust.

- ▶ Don't do anything that might look dodgy!
- ▶ In **summative** assessment you must mark all scripts to the same standard (anonymously if possible).
- ▶ In **formative** assessment you can customise the feedback a little — but don't overdo this.

If you suspect that students are **cheating** then refer it to the lecturer immediately.

Take-home messages

Teaching can be great — even when it's challenging!

With any luck, all of the following seem obvious.

- ▶ **Prepare** thoroughly, especially for easy material.
- ▶ Consider how what you do and say will help the students to **improve**.
- ▶ Be firm about **behaviour**, esp. at the start of a course.
- ▶ Sometimes things screw up. This happens. It's not necessarily your fault.

Some suggestions for further reading are on the handout...