Authenticity in course materials for postgraduate scientists and mathematicians

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I'd like to thank everyone who attended my workshop at the Leeds BALEAP PIM for your positive suggestions, pertinent comments and excellent questions, in the light of which I have added some new material to the original slides.

Apologies to those of you who attended and didn't have a chance to discuss these ideas with me – I'd greatly welcome any further comments, suggestions or questions if you'd like to get in touch with me at Durham.

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The Institutional Context:

At DUELC, we currently run the following EAP programmes:

- Year-Round Pre-sessional (YRPS)
- Summer Pre-sessional
- In-sessional (afternoons and evenings)
- PG writing seminars (occasional)
- Collaborations with some departments e.g. Business, Music



The Problem:

Keeping science & maths post-grads happy in an EGAP (social science!)

monoculture

- Postgraduate scientists are the minority in YRPS classes (3 out of every 10) and are in mixed classes with undergraduates/foundation students
- We have started to run discipline-specific "Bespoke" Summer Pre-sessional courses but all scientists + mathematicians are in just one "science" class
- Materials are all based on social sciences (and much material is not authentic): even when topics have a scientific basis (e.g. nanotechnology, genetics) they are ABOUT science, not actually science
- Assessment is through timed writing (short essays: 300-700 words); we teach
 Harvard referencing but most scientists & mathematicians use numeric systems
- Only 1 full-time member of the DUELC staff is a PhD scientist



How We Currently Teach Academic Writing:

- There are 3 stages to the YRPS course (1 yr = 3×10 wk courses)
 - 10 hrs/wk Academic Writing assessed through timed writing
 - 4 hrs/wk OEK (see next slide) longer managed essays
 - + 4 hrs/wk Reading & Vocabulary
 - + 3 hrs/wk Listening & Speaking
- There are also three similar stages to Summer Pre-sessional (3 months)

Output + assessment for writing = short argumentative essays (for PhD scientists???)

In-house topic-based materials cannot be adapted to individual needs/academic interests as they are embedded in the overall course structure with corresponding listening, readings etc.



OEK (Organisation & Expression of Knowledge)

- On the YRPS course we also have 4 hours/wk of OEK, a course developed by my colleague Louise Greener
 - Stage 1: pre-selected topic with pre-selected readings (1,000 words)
 - not popular with YRPS PG scientists/mathematicians
 - Stage 2: empirical research project questionnaires/interviews (2,000 words)
 - this method of enquiry is not relevant to PG scientists/mathematicians
 - Stage 3: essay of student's own subject (3,000 words)
 - this is by far the most popular of the OEK projects with everybody, especially the PG students, as they finally get to write about their own subjects.



How we currently manage Term 3 OEK

- 1) Library visit: how to locate books, & search online for books & articles
- 2) Students develop a research question based on their subject area
- 3) Computer session to download articles (5-10)
- 4) Lessons to teach micro-skills (e.g. referencing, compiling a biography)
- 5) Poster Presentation of the essay plan at a "Poster Conference", in which students can critique each others' plans (teaching staff are invited too)
- 6) Students submit first drafts (compulsory) on Friday Week 6 and can also submit second drafts to the OEK teacher in Week 7 for critique.
- 7) Final draft hand-in (Week 8); followed up by an assessed presentation



Proposal:

All writing should be like our Stage 3 OEK project

(though not as long!): with teacher as guide (not fount of all knowledge)

- 1) Class library visit
- 2) Computer session to download articles
 (First term: three journal articles/student: with copies for the teacher; portfolio system)
- 3) Article analysis/guided discovery (teacher would do an example first through text-framing)
- 4) Peer teaching/comparison: arts vs. sciences (etc.)
- 5)Micro-skills controlled practice stage
- 6)Poster Presentation
- 7)Output: first draft, second draft and finished essay



Rationale:

(emic not etic)

"House-building": when building a house you do not start from the roof

- Learner-centred/individualised
- Based on needs analysis in Week 1 (like ESP)
- Motivating
- Learner Autonomy
- Preparation for life at the academy
- Settles disputes (should I use "I" or not?)

"Research-led from Day 1"

(Dr Jen Topping, Chemistry Dept., Durham University)



The result: happy students

(not just PG scientists and mathematicians!)





Discussion:

Q1. How can we handle controlled practice between the authentic text analysis and the final output (i.e. the finished essay?)

It was suggested during the session that students would essentially produce parallel texts such as example paragraphs based on their three texts and further research

Q2. How can we assess essays from different disciplines/genres?

"Young Musician of the Year" syndrome: how do you compare the violinist with the trombone player or the percussionist? But there <u>are</u> criteria which can be applied to all, and the same applies to writing

Q3. Can teachers handle it? (I think we can!)

Essentially, the students will be doing most of the work. If the teacher really feels that s/he can't mark an essay because of the content, we could ask the relevant department for help or perhaps ask a PhD student

Q4. Would students be restricted to writing only about their 3 downloaded texts?

I would suggest not: I had envisaged the 3 texts as a repository of language for analysis. All students would be welcome to do further research

Q5. What would scientists and mathematicians write about, as they do not have their own data yet?

Scientists/mathematicians would have to critique the work of others, perhaps producing a literature review. If they have MSc data they would be welcome to use this in their essay.

