



Contents

The Biology Demonstrators' Workshop & Resource Pack

- Introduction to the Biology Demonstrators' Workshop and Resource Pack
 - Workshop Programme
 - The Briefing Meeting

 - Checklists
 1. Administrative Aspects
 2. Academic Aspects
 3. Practical Aspects
 4. Safety Aspects
 - Health & Safety Regulations

 - Health and Safety for Science Demonstrators

 - Reflection, Feedback and Observation

 - Support for Demonstrating

 - Graduate Teaching Assistant Course Leaflet

 - Biological Sciences Staff List

 - Module Lists

 - Departmental Student Handbook (supplied separately)

 - Demonstrator Register

 - Request for Part-Time Teaching Form

 - Extracts from Departmental Policy on Part-Time Teaching Support
-



Introduction

The Biology Demonstrators' Workshop & Resource Pack

We value the unique contribution demonstrators make to our undergraduates learning experience. Students benefit from the extra support they receive in practicals from demonstrators who have been in their position more recently than a lecturer! They also absorb a real flavour of research in our Department. Lecturers definitely benefit from the support they receive in managing large classes. Most demonstrators find it a rich and rewarding experience in addition to the financial supplement! For many of you it could be the first step towards a teaching career in Higher Education.

Obviously being prepared is essential if everyone is going to get the most out of this interaction. However, because of the demands of research most demonstrators don't have time for lengthy training sessions. So this workshop is our compromise, hopefully providing the necessary preparation in the minimum time. As part of the department's policy on part-time teaching (see separate sheets) all new postgraduates are asked to complete this mini-course as preparation for demonstrating. The workshop can't hope to cover all aspects of part-time teaching: - lecturing, field work, marking, invigilation, but instead concentrates on the most usual activity, laboratory based practicals.

In the workshop you will have an opportunity to

- 1) Discuss the main components involved in demonstrating.
- 2) Find out about essential safety aspects, including where your responsibilities begin and end.
- 3) Raise and discuss any concerns you may have.
- 4) Learn about the paperwork associated with raising a contract and getting paid.
- 5) Ascertain the support you can expect and the feedback you should receive to help you improve.

As part of the Department's support for you we are providing this resource pack. We hope it contains useful information; a lot is included as a response to demonstrators comments. It includes check sheets to help you keep on top of the various tasks associated with preparing for demonstrating, together with essential safety guidance. It details the teaching activities of the department and the academic staff involved, which should help you identify areas where you might demonstrate. Also to help match demonstrator and teaching there is a form to register your interests and expertise with the Department.

We have used a loose leaf pack so that it can be easily added to and updated. You can add tips you pick up in the workshop and customise it with information you receive later as part of your specific demonstrating activities.

Finally, enjoy your demonstrating and transmit your enthusiasm to our students. Remember contact between undergraduate students and active researchers is essential in ensuring our teaching is enriched by your research.



Demonstrator Training Workshop

(example)

Educational Development Services Training Room
Babbage 319

Programme

9.30 **Welcome & coffee**

9.45 **The role of the demonstrator**

- the ideal demonstrator
- preparing for practicals

10.00 **Briefing sessions**

10.15 **During the practical**

- Presentational skills appropriate for introducing practicals
- Supporting students during practicals

10.45 **Laboratory safety**

11.15 **Coffee**

11.45 **Registers and within-class assessments**

Observation and debriefing

Contracts & remuneration

Continuing support for demonstrators

12.00 **Dealing with tricky situations**

- Group discussions

12.30 **Plenary discussions**

13.00 **Finish**



The Briefing Meeting

If you are to fulfil your role it is essential that the lecturer for whom you are demonstrating gives you clear guidelines. Academic staff are very busy and since demonstrators are often brought in to reduce staff workload lecturers can sometimes tend to sideline briefing meetings. However, the meeting is not some optional extra and you should insist your member of staff takes time to meet with you. This is your right and also a key element of Departmental Policy on part-time teaching.

You can help to streamline the meeting by ensuring that you are well prepared. Ensure you read the schedule and any other recommended reading supplied before the meeting, and come with a list of questions you need answering. The checklists supplied in this pack should be helpful, but there are probably many other questions, specific to particular practicals. The key areas which need to be discussed in all briefing meetings are:

- 1) The mechanics (when, where etc.): See Checklist 1, Administrative Aspects
- 2) The necessary resources (schedule, background reading) necessary for supporting practical
- 3) Your role in achieving the overall aim and specific objectives of the practical, including cross-referencing to the rest of the module (specific lectures etc.)
- 4) The level of help you are expected to give students (hands-on/hands-off)
- 5) Your role in attendance monitoring and within-class assessment
- 6) Safety aspects: see Checklist 4, Safety Aspects
- 7) Other support likely to be present: Is the member of staff going to be present/available? Will other demonstrators be present? Is there a technician on hand? (see Checklists 2 and 3 for further details)

Remember the briefing is essential preparation for demonstrating



Checklist

Checklist 1: Administrative Aspects

- Have you ensured your supervisor is happy for you to undertake this demonstrating?
- Have you received and checked copy of 'Schedule of Work' prepared by module leader and authorised by the Head of Department or his/her nominee?
Date received
- Have you received, signed and returned formal part-time contract from Personnel department? Date returned
- Have you had a briefing meeting with the member of staff responsible for the practical? Date of meeting
- Are you satisfied with the contract relative to level of responsibility requested (see departmental policy extract on part time teaching)?
- Do you know the time, date and venue for the practical and checked your availability? Time; Date; Venue
- Do you know the details of the group: module code, number of students?
Module; Number of Students
- After demonstrating have you completed a FINPAY01 form and sent to Faculty Office? Date sent
- Have you been paid? Date received



Checklist

Checklist 2: Academic Aspects

Have you got a copy of the practical schedule and any other handouts?

Are you aware of overall aims of the practical?

The main aims are:

1.

2.

3.

Do you understand the context of the practical i.e. where it fits in the overall module scheme?

Have you clarified your role in achieving specific objectives e.g. training students in particular techniques?

Have you done the necessary background reading?

Have you clarified your role in supporting students?

Have you ascertained the level of help you should give e.g. answering questions directly vs. encouraging students to seek their own solutions?

Are you going to be involved in attendance monitoring?

Are you going to be involved in any in-class assessment?

Have you got copies of all crib-sheets/solutions to problems appropriate for assessment responsibility?

Have you ascertained the level of personal responsibility e.g. left on your own; shared with other demonstrators?

If responsibility is shared, have you a clear understanding of the division of labour between demonstrators?

After the practical have you received feedback from the member of academic staff?

Have you reflected upon/made a list of ways you could improve your demonstrating?



Checklist

Checklist 3: Practical Aspects

Do you understand the level of your personal technical responsibility e.g. left on your own; supporting member of staff in attendance?

Are you aware of possible technical problems which might arise during the practical?

Details:

Have you been informed of any student with a particular problem which might affect their performance?

Name.....; Nature of Problem.....

Have you checked any key pieces of equipment which you will be specifically demonstrating?

Have you run through any key techniques for which you may be responsible?

Do you know the name and contact number of technician(s) responsible for the practical?

Technician.....; Room/Extension.....

Have you consulted the appropriate technician if necessary, particularly about their availability for technical support during practical?

Do you know the protocols for students tidying up before they leave laboratory?

Have you completed the *Safety Checklist*?



Checklist

Checklist 4: Safety Aspects

- Are you aware of Departmental Safety regulations? (see enclosed booklet)
- Have you read all relevant COSHH and Risk Assessment forms for the practical?
- Have you ascertained your level of personal responsibility for safety e.g. left on your own; supporting member of staff in attendance?
- Are you aware of possible safety problems which might arise during the practical?
Safety problems
- Have you been informed of any student with particular disabilities/other factors likely to pose particular safety problems?
Student; Nature of Problem
- Have you located key safety equipment (fire extinguishers, eye-washers etc)?
- Have you located key exits to be used if laboratory needs to be evacuated?
- Do you know how to summon help during a practical?
Contact person/Extension
- Do you know the name and contact number of technician(s) responsible for the safety of the laboratory?
Technician/Extension
- Do you know the name and contact number of a local first aider?
First Aider/Extension
- Have you checked that the laboratory has been left in a safe condition? (equipment turned off; no hazardous substances left accessible etc)



Support

Support for Demonstrators

If you encounter problems in your demonstrating duties and feel the member of staff responsible for the practical is not the most appropriate advisor, there are a number of other people who you may approach for support:

- **Workshop**

This is organised by Dave N Price, Room 12, 6 Queen Anne Terrace (Telephone 01752 232907); e-mail dnprice@plymouth.ac.uk). Dave can also probably help with most general issues.

- **Your Peers**

Obviously other demonstrators can often be very helpful to share experiences and discuss problems. Over the years many informal networks of postgraduates have developed in which as well as providing mutual support for their research, experiences of demonstrating have been the main topic of conversation.

- **Your Supervisor!**

- **Research Student Tutor:**

Prof. Malcolm Jones, (16 Queen Anne Terrace: Telephone 01752 232911; e-mail mjones@plymouth.ac.uk)

- **Subject Leaders**

These should be able to help with specific subject-related problems/issues.

For the Cellular, Microbial and Human Biology area the leaders are:

- Dr. Jack Harris (telephone 01752 232948; e-mail jharris@plymouth.ac.uk)
- Dr. Christine King (telephone 01752 232941; e-mail cking@plymouth.ac.uk)

For the Ecology, Marine Biology and Plant Sciences area they are:

- Dr. Mick Uttley (telephone 01752 232918; e-mail muttley@plymouth.ac.uk)
- Dr. Geoff Wigham (telephone 01752 232917; e-mail gwhigham@plymouth.ac.uk)

- **Educational Development Services**

Dr. Rhona Sharpe, 321 Babbage Building (Plymouth campus; telephone 01752 232345; e-mail rsharpe@plymouth.ac.uk). Rhona is not only involved in running the Biology Demonstrators' course but runs a much fuller Graduate Teaching Assistants short course (see separate leaflet). For those of you who would like to develop your skills further, this course offers a training opportunity in a range teaching skills with successful participants receiving a formal qualification.



Support for Demonstrators

Educational Development Services has a Resources Room with books, videos and journals related to learning and teaching in Babbage Room 321

- **Additional Reading**

Ward, A., Baume, D., & Baume, C. (1997). *Assisting with Laboratory Work and Field Trips*. Learning to Teach Series. Oxford Centre for Staff and Learning Development.

Allison, I. (1995). *Demonstrating*. in F. Forster, D. Hounsell & S. Thompson (Eds). *Tutoring and demonstrating: a handbook*. Universities' and Colleges Staff Development Agency.

The Graduate Student as Teacher. Chapter 8 of "Postgraduate Study in the Biological Sciences: A Researcher's Companion", Published Portland Press, London 1993.



Demonstrators' Register¹

Please use this form to provide your details and indicate the areas and type of part time to teaching you would like to undertake. This register will be held in the Departmental Office (6, Queen Anne Terrace) where it may be consulted by academic staff requiring demonstrator support (please ensure the details are updated as necessary). You may also feel it worthwhile to send it directly to specific module leaders (see separate list). Keep a copy of this form for your records.

Name: _____

Contact Address: _____

Telephone: _____

E-mail: _____

Post/Status (FT/PT): _____

Supervisor: _____

Title of your Research: _____

Degree(s) Held: _____

Subject Expertise: _____

Generic Skills: _____

Preferences:

A. Activities (✓): Lecturing (); Demonstrating (); Marking ()

B. Subject Areas: _____

Other Information:

e.g. relevant experience; modules to which you feel you could make a particular contribution (see separate module list); career aspirations. Continue overleaf if necessary.

¹This has still to be approved by the departmental Teaching Management Group and Subject Leaders

Biological Sciences



Extracts from Departmental Policy on Part-Time Teaching

The Selection and Use of Demonstrators

- Details are required on the relevant form indicating the nature of support requested/special factors/student numbers etc. In making requests, staff should indicate need for support and preferred demonstrator if known.
- Every postgraduate should have the opportunity for demonstrating/teaching - it can be an important part of postgraduate training, but we cannot guarantee even distribution of workload. An updated central register of interests/expertise is needed.

The Three Categories of Work

- (i) Lecturing (rate = £25.67 per hour). On this rate, the lecturer is expected to take full responsibility for devising and delivering lectures, tutorials, seminars or practical sessions. Usually, this would also involve responsibility for assessments such as exam questions or essays and the number of hours allocated will include this.
- (ii) Demonstrating (rate = £12.81 per hour). On this scale, the demonstrator is expected to consult the academic staff in advance of a practical and carry out necessary reading and preparation. Attendance at briefing sessions and follow-up meetings is essential. The demonstrator will assist in the practical class working from a schedule prepared by the staff member. The demonstrator may be asked to carry out in-class assessments such as checking student's work, marking simple exercises etc. (Any additional marking outside of the class will be contracted separately). A demonstrator at this rate is permitted to take charge of supervising a class provided that the staff member is satisfied that health and safety precautions are satisfactory.

N.B. Both of the above rates include an allowance for preparation and follow-up activities.

- (iii) Marking (rate = £4.53 per hour). This scale is used for marking. The academic staff member is responsible for estimating the number of hours required and should provide the marker with a detailed marking scheme and discuss the results with them.

Preparation

- Staff responsible must provide adequate briefing, and constructive feedback on good (and unsatisfactory!) performance. We need to be open and honest about this. Interaction of demonstrators with students has improved greatly since the introduction of the teaching development course for the demonstrators.
- The aims and objectives of the practical and the demonstrators' role, must be spelt out clearly.

Workload/Contracts

- Research students should not be over-committed with part-time teaching.
- Full-time postgraduate students - teaching load should not exceed an average of 6hr/week (reduced load in early stages).
- Full-time research staff, post-doctoral fellows will normally be employed on the Associate Lecturers rate.



- Research assistants - may be at Demonstrator or Associate Lecturer rate as appropriate.
- Since an allowance for marking and preparation is included in the Lecturer rate, commitment should not normally exceed 25 hours per semester.
- Part-time postgraduates may be involved in more demonstrating, but this will depend on recognition of the need for support, in particular, high demand activities (e.g. fieldwork, workshops). Opportunities for post graduate students to demonstrate in other Departments should be explored.

Assessment

- The use of demonstrators in marking needs to be carefully monitored to ensure that normal quality assurance procedures apply.
- Post graduate students should not be responsible for marking coursework unless: -
 - 1) There is a very clear marking scheme for items in which the objectives are straightforward to mark (e.g. simple short answers, multiple choice questions, feedback sheets from practicals).
 - 2) Staff remain responsible for an assessment. They must discuss the assessment criteria and review the standards after a sample batch has been marked. Where more than one marker is involved, checks should be made to ensure parity.
 - 3) Where a request for marking assistance is made, the staff responsible must submit full details of the assessment plus marking scheme (this will be monitored at intervals by the Teaching and Learning Management Group).
 - 4) Where experienced postgraduates or research staff are employed at the Lecturer rate, they may be involved in higher level assessment. The module leader should ensure that appropriate briefing and checks are in place to ensure quality.

Training & Teaching Observation

- Further development of training workshops and support materials is desirable.
 - Part-time staff must be involved in the peer observation process and receive appropriate feedback.
-



Reflection, Feedback, and Observation

If you are to improve your demonstrating you will need to reflect on your performance after the practical. Write a list of the things you think went well, those which didn't go too well and ways you feel you could improve. Using the checklists 2-4 retrospectively could be helpful.

You also need feedback from others. Why not ask the students? This is particularly useful if you are helping to run a series of practicals with the same group. If there were more than one of you demonstrating, compare notes to see if there are tips you can give each other. Most importantly, get feedback from the member of staff responsible for the practical.

It is departmental policy that staff should provide debriefing for demonstrators. In most cases this will be a fairly informal chat at the end of the session. However, you are entitled to a fuller debriefing if you wish. It is most effective if staff can be open and frank and this is easiest if you invite him/ her to be constructively critical. Showing that you are looking to improve gives the right message to the staff/department. It should be a two-way process. You may have been more involved in the actual running of the practical than the member of staff and seen problems at first hand. Providing feedback, including suggested improvements, is always helpful to staff and can significantly improve provision for future students. Building good relations with staff who are not necessarily your supervisor can be very beneficial especially if you need a referee in the future who can comment favourably on your teaching and related abilities.

All academic staff are observed by their peers at least twice each year. This observation is extended to part time staff, including demonstrators (see departmental policy on part-time teaching). It is a little more formal than the debriefing described above, and usually involves a form with specific headings for feedback. If you undertake a significant amount of demonstrating you will be observed at least once a year, normally by the member of academic staff responsible for the practicals. The details are confidential between you and the member of staff. Obviously if through this, or less formal observation, your performance as a demonstrator was consistently felt to be unsatisfactory you would not be permitted to continue demonstrating, but this has never happened yet! However, we and the University need to ensure that our students are receiving the best possible support in practicals. Practical are an expensive but indispensable component of the students' experience at Plymouth and effective demonstrators are a key component of this provision.