

Dublin Chemistry Graduate Assistant Module CHEM40340 (Demonstrator Module)

Objectives: This is a 5 ECT course with two objectives

- 1) To make demonstrators more aware of the key role that preparation plays in successful teaching
- 2) To give demonstrators an opportunity to further improve their teaching skills in the laboratory environment by acting on feedback from both their supervisors in the teaching laboratory (*i.e.* the academic member of staff in charge of the laboratory, hereafter 'the academic') and the undergraduate students they teach.

Module Structure

- The module normally runs over the course of one semester – assessment is made based on performance over 5 sessions.
- The assessment consists of three parts:
 - a) **A generic experiment questionnaire** to be filled out and handed up by the demonstrator to the academic before the start of the experiment being taught (structure will vary from practical class to class). If any of these questionnaires are not satisfactorily filled in prior to the corresponding experiment no credits will be awarded. The academic signs and dates the forms as he/she receives them and hands them back to the demonstrator after a pass/fail assessment. Forms deemed to be unsatisfactory cannot be resubmitted.
 - b) **Two short, informal interviews** between the demonstrator and the academic. The first will take place after the second week of the session – when the results from the first anonymous survey of the undergraduate students has taken place. This can take place in the laboratory if convenient and will discuss the feedback from the students, and a course of action as to how the demonstrator might improve is agreed. If no areas for improvement are identified by the undergraduates, areas for improvement should be identified by the demonstrator and the academic (nobody is perfect). The second will be at the end of the session by which time the results of the second student survey will be available.
 - c) **Two short reports** drawn up by the demonstrator – the first should represent a précis of what was agreed in the first interview. The second is a list of things which the demonstrator changed as a result of student feedback and an interpretation of the feedback by the demonstrator; this forms the basis of the second interview.

Note – the demonstrator submits two copies of the signed and dated documents: the questionnaires, feedback, and reports. One is submitted to the academic and one to the Chemistry Office (A standard cover sheet to be use in all submissions for the module will be circulated by the Office later.)

After the second interview the academic examines the student feedback and the demonstrator's brief reports. If the academic agrees that the graduate student has both prepared properly for the five experiments (*i.e.* the pre-experiment questionnaires) and improved as a demonstrator, the student has passed the course. The academic informs the office.

General Regulations.

- Demonstrators can only be awarded credits for this module once over the course of their studies and cannot take the module more than once in an academic year.
- Demonstrators must inform the office, the academic and the designated technical staff member of the date they wish to start the module at least one week in advance. The designated technical staff member in the Cocker Lab is Mr. Peter Brien and in the Physical Chemistry Laboratory is Mr. Patsy Greene.
- The student surveys will be carried out by the technical staff, at the request of the demonstrator. **It is up to the demonstrator to agree with the technical-officer contact and the academic the times and dates for the interviews and surveys at least one week in advance**. Demonstrators need to organise the examination of their own module. Nobody will do this for you: credits will not be awarded if the requirements stated above are not met. No exceptions.
- Demonstrators must not give out the survey forms or collect them, alter the surveys, or influence the students in any way while they are filling them out. To do so will result in failure of the module.
- Each page of the surveys will be signed and dated by the technical officer and given to the demonstrator at the end of the session in which they were collected. Likewise, the 5 questionnaires are signed and dated by the academic on the day that experiment is to run and returned to the demonstrator. Unsigned surveys or questionnaires will not be accepted for submission at the end of the module.
- Following the second interview the demonstrator submits the 5 questionnaires, the feedback and both reports to the academic, who then reviews them and informs the office if the student has passed or failed. The academic's decision is final – the only criteria for passing are proper preparation by the demonstrator (questionnaires) and improvement in performance (as adjudged from a combination of student feedback, the demonstrator's reports and the academic's observations).
- At the end of the academic year the demonstrator will be informed of the result.
- Undergraduates will be made aware of the nature of the exercise – they will know that demonstrators voluntarily take the module in an attempt to improve their laboratory teaching skills. It will also be made clear that a demonstrator who refuses to tell them something they should know/calculate for themselves (*i.e.* the answers to lab-book questions *etc.*) is not underperforming or being unhelpful. It will be explained that both praise and constructive, fair criticism of the demonstrator is useful. Unjustified/unacceptable comments from undergraduates in surveys will be censored/cut out by the technical staff before the surveys are handed over to the demonstrator.

Guide for postgraduate students taking this module

This is an optional module. The responsibility for organising the module lies solely with the demonstrator. If surveys are not taken, forms not handed in, reports not given to academics/the office (on time), forms handed in late or meetings are not arranged etc. no credits will be awarded. Any attempt to discuss the student surveys or feedback with the undergraduate students will result in no credits being awarded and the demonstrator will not be allowed to take the module again.

- Inform the office, the academic in charge of the lab (not a senior demonstrator) and the technical-officer contact at least one week in advance of the time that you wish to be assessed. Arrange in advance with the technical officer when the surveys need to be done (again, at least one week's notice) and remind them again on the day. Arrange when you will have meetings to discuss survey results with the academic in charge in advance.
- Note that you have to print/copy the survey forms and hand them to the technical officer.
- Fill out the demonstrator questionnaire in advance of each experiment. Turn up before the time that the lab starts and hand it to the academic in charge. They will read and sign it, and return it to you. Please be advised that if you do not do this, or if the questionnaire is not filled out to a satisfactory standard, no credits will be awarded.
- Demonstrate to the students in the normal way. Either at the end of the second session or the very beginning of the third, the students will be surveyed by the technical officers. The technical officer will sign and date each page of the survey, and record how many were taken. He/she will then pass the survey results back to you.
- Consider the feedback in the surveys – and reflect on your performance. It may be helpful to ask yourself questions such as: How can I improve as a teacher and a demonstrator? How can I engage more with the students I teach? How can I better prepare for experiments etc.
- Meet with the academic. This should be an informal meeting, where you both discuss how you might improve, taking the feedback from the surveys into account. This meeting should be 5-10 min. and should end with a plan as to how you could improve as a demonstrator. You need to take notes of what is discussed, type this up and give a copy to the academic; he/she will sign your copy if it reflects what was agreed.
- Implement the plan over the next three laboratory sessions. This will require effort and concentration on your part.
- At the end of the fifth session the survey procedure is repeated exactly as before.
- Meet with the academic again. Again you will have a 5-10-min. discussion as to how you feel you improved, based on the feedback from the students. The academic will not give you a decision there and then. You need to give the academic copies of the original (no copies) signed questionnaires (x5), student surveys (x2) and meeting reports (x2). Then they will review this and make a decision. They will inform the office, and when the last laboratory of the year has taken place the office will inform you of the result.
- You also need to submit copies of all the documentation to the office in a folder, clearly marked with your name, to the academic involved in the laboratory sessions you were assessed in. This must happen within one week of finishing the laboratory sessions you were assessed in.

Modified Guidelines for demonstrators being assessed on a single experiment (i.e. CH1101, CH1E05)

For demonstrators being assessed on their demonstration of a single experiment (as opposed to a single group of students) the following applies.

- Students are still surveyed in the usual way but now involves a different cohort of students on each occasion, surveyed at weeks 2/3 and 5.
- The demonstrator questionnaire before each experiment need only be filled out once - in week 1.
- As you demonstrate the same experiment each week, you will be in a better position to suggest improvements, reflect on your performance etc. Therefore, as part of your assessment, you need to prepare a document (ca. one page) that addresses the following topics at your meetings with the academic after weeks 2 and 5:
 - Observations on student Experimental write-ups (e.g. what errors have they been making in their write-ups, how can you improve communication with them so that these are avoided later *etc.*)
 - Work/difficulties the students have with the experiment and steps taken to promote improvements
- In the second submission (i.e. at the end of week 5) you will have to provide evidence (from student write-ups) to the academic that:
 - (a)** the problems that you have identified (above) exist,
 - (b)** that you have taken steps to help these students out with these difficulties and
 - (c)** that the steps you took proved in some way effective.
- The academic will consider your reflections above, along with evidence from student surveys and their own observations in the lab, as to your level of improvement throughout the session.

Guide for technical officers

- It is up to the demonstrator to ask you at least one week in advance to carry out the survey for them. There are two surveys and they should remind you in advance each time. You do not have to do this on the day because they forgot.
- Please hand out the surveys to the demonstrator's group of students and explain that this is a voluntary survey, leave it with the students for 10 min and then collect. Please do not let demonstrators play any role in the survey – the exercise has no value if they are a part of it.
- Please sign and date each page of the survey, and write the name of the demonstrator on the front page.
- Please check the 'comments' section – any personal or inappropriate comments should be physically cut out (not blacked out). Criticism/praise of performance is ok (and useful), but no personal comments or comments using inappropriate language should be passed on to the demonstrator. The same goes for comments not related to the demonstrator's performance in the laboratory.
- Please keep a record of the demonstrator's name, and how many students took the survey. Then pass this on to the academic asap after the survey has taken place.
- When this is done, please hand the surveys to the demonstrator, who looks after them from there.

Guide for academics

- Please have a look at the module descriptor/regulations before reading these guidelines
- It is up to the demonstrator to tell you and the office at least one week in advance that they are taking the module. Please record the names of the students taking the module. It is up to them to organise everything, but you should know who is taking the module in each lab.
- Please mention the module to undergraduates in the first pre-practical talk of the session.
- The demonstrator must turn up on time (before the lab starts) and hand you the questionnaire before each lab session. If it is satisfactory please sign and date it and hand it back to the demonstrator.
- This module is about improving demonstrator performance – if they are late or do not have a satisfactory questionnaire to submit at the start of any one lab they fail the module. Please enforce this rule. There is no major loss of time to the graduate student, just inconvenience - the module is optional and can be repeated. If they are allowed to turn up late, or hand up late, sub-standard material then the whole exercise becomes a 'box-ticking' exercise and a complete waste of time.
- After 2 sessions (*i.e.* at the start of the third session) the demonstrator will hand you the surveys and request a short, informal interview (10 minutes max.). This can take place in the lab if convenient. Please check that the survey results are initialed and dated by the technical officer and ensure that you are handed the right number of surveys. The technical officer will give you this information beforehand.

- Please review the surveys and agree a course of action as to how the demonstrator can improve his/her teaching skills and performance in the lab. The demonstrator will keep notes of this meeting – specifically putting in writing the steps that should be taken - which you should sign and date. Otherwise this meeting should be informal, more of a constructive chat than anything else. Please focus on the positive, while pointing out obvious areas for improvement.
- At the end of the last (5th) session the process is repeated. If the demonstrator has improved their performance and/or their teaching skills have improved, this should be reflected in the interview, in the survey results and in your own observations of the demonstrator in the laboratory. In the unlikely event that the surveys conflict with your own assessment (either positively or negatively), please use your own judgment as to whether to assign a pass/fail grade. The demonstrator will furnish you with copies of the questionnaires, reports and surveys to help you make your assessment.
- It is significant improvement in performance (not absolute levels of performance) over a relatively short examination period that is important in this exercise. A demonstrator who prepares properly, turns up on time and demonstrably takes steps to improve his/her teaching over the 5 experiments passes the module. Demonstrators who try to cut any corners or do not make a serious effort to improve fail the module.
- Please inform the office as to whether the student has passed or not as soon as possible after the last lab session. This is vitally important, as in some cases credits for this module will need to be assigned for students to be allowed to graduate etc. At the end of the academic year, please submit all the documents to the office.

Guide for the office

- The demonstrators will inform you in advance that they wish to take the module, and will give you the dates, the name of the academic involved and lab sessions involved.
- Please set up a spreadsheet with this information
- At the end of the module the demonstrators will submit all the documentation to the office in a folder. Please note the submission in the spreadsheet and issue a receipt.
- The academics will inform the office by email of a pass/fail grade for each student – at the latest by the end of the second semester. Please update the records, and when complete send it to the DTLPG for review. When this review is complete please hold the records for one month and then destroy the documents.