

Coordinators Leading Advancement of Sessional Staff (CLASS) Project

Exemplars of Good Practice Initiatives

CHEMISTRY, FIRST YEAR LABORATORIES, CURTIN

EXEMPLAR: CHEMISTRY, FIRST YEAR LABORATORIES, CURTIN

Title: Preparing laboratory demonstrators for first year labs

University : Curtin University

Discipline Area: Chemistry

**Subject/Unit
Coordinator (optional)** Mauro Mocerino

Level of Unit Year 1

Number of Students: 1000-1200

**Number of Sessional
Staff** ~30

Delivery Mode: Face to face

Profile: Most laboratory demonstrators are Honours or PhD students.

Background/Context: All our first year chemistry classes have a laboratory component. Laboratory classes can have up to 90 students in the lab with a demonstrator/student ratio of approximately 1:18. An experience demonstrator is assigned the role of overseer to mentor and advise younger demonstrators during the lab class.

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Good Practice Initiative:

Prior to commencement of teaching, all demonstrators attend a one-day workshop on teaching in laboratories. This focuses on the role of labs and demonstrators, an introduction to learning theory, common laboratory scenarios and assessment processes.

Demonstrators complete and submit to the coordinator, prior to the lab class, a summary preparation-sheet template outlining the key learning objectives, possible student difficulties, procedural flow-diagram and possible questions they could ask students to probe their understanding.

Demonstrators attend a weekly meeting with the coordinator to discuss the coming experiment. The meeting is structured along the questions addressed in the submitted template. A brief discussion is also held to review any concerns regarding the previous experiment that may have arisen during the class.

Tips for Implementation:

Demonstrators need to think about the learning objectives of the lab and these should guide their behavior. The focus of the workshop and the template are on the learning objectives and ways to maximise these. Demonstrators need to complete the template themselves (demonstrator workbooks which provide the answers to questions associated with the experiments, do not work well). A weekly meeting to discuss the next experiment is critical (especially coupled with the template).

Copies and the workshop booklet and preparation template are available from the coordinator on request

Evaluation:

Student feedback on their learning experience in laboratory consistently rate the demonstrators as very good.

Demonstrators annotate/add to their preparation sheets during the meeting (new demonstrators add significantly). The preparation sheets of experienced demonstrators become more detailed with experience.

Reflection:

The common belief of many demonstrators is that the objective of the lab is to complete it quickly (thus ignoring the many learning opportunities available). Without the demonstrators completing the preparation sheets, the weekly demonstrators meeting was virtually a monologue (and therefore much less effective). When prep sheets are completed before the meeting, discussion of the issues relating to the experiment was more robust and active participation during the meeting by most demonstrators is common.
