



UNIVERSITY OF  
**BATH**

# Final Year Group Research Projects

## A Case Study

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# Final Year Research Projects

- **Background, rationale and context**
- **How we did it**
- **Does it work?**
  - **Student feedback, peer response, external examiner**
- **Lessons learnt and some tips**

# Background

- **Increasing student numbers**
- **Huge demand on resources**  
**(laboratory space, staff time etc)**
- **Projects are expensive to run**
- **Usually supervised by post-docs or PhD students**
- **Students do not necessarily develop research or transferable skills**

# Rationale

- **Maximising use of available resources**
- **Minimising workloads**
- **Mentoring scientific minds**

# Context

- **Final year 12-credit unit (200 study hours)**
- **11-week duration in semester 2 with typically 25- 40 students / year**
- **Mandatory for all final year biochemists without placement experience and optional for those with placement experience (year 3/4)**

# How we did it

- **Unit information given to students ~ 2 week before start of teaching (project information, guidelines..)**
- **Team building exercise, project and partner choices made in first meeting (~ 24 students grouped into pairs) followed by lab tour and health & safety issues**
- **Group Training session on generic research skills and techniques**

# How we did it

## 1. Choice of Projects

## 2. Location

- ❖ Conducted in practical- teaching labs
- ❖ Bench space set aside for project
- ❖ Students manage their experimental time

## 3. Equal emphasis on research and transferable skills (assessments)

- ❖ Students collaborate with each other and postgraduate students
- ❖ Regular meetings with the supervisor

## 4. Dedicated postgraduate demonstrators (2)

- ❖ Trained PhD students help in the supervision of projects
- ❖ Funded by the department for 4 years (instead of 3) with the undertaking they help in this project for 11 weeks/ year
- ❖ Trained in research supervision by regular meetings with the unit convenor and by attending staff development workshops on research supervision.

# 5. Assessment

Weighting (%)	Skills assessed	Assessed task
50	Scientific report writing	Final research report
5	Experimental design	Experiment plans
5	Critical appraisal skills	Abstract and literature review
5	Data analysis and interpretation	Reflection in lab records, discussion meetings with supervisor
25	Performance in the laboratory	
10	Effort	Observation and lab records
5	Good laboratory practice	Observation and lab records
5	Record keeping	Lab notebook
5	Team work	Observation, lab records, progress
5	Problem solving skills	discussion meetings with supervisor
5	Originality / flair for experimentation or initiative	discussion meetings with supervisor lab notebook



# Does it work? Student feedback

## Some Comments

- *The insight into real research gained through actually taking part in a real research project ..*
- *Got to implement some of the procedures learned in a research context, in a university environment.*
- *Much easier and smoother introduction to laboratory research than working on a lab placement.*
- *Being able to complete a project from beginning to end without simply following a protocol, learning new skills and implementing the science you have learnt over the years. This project involves a lot of hard work but is very rewarding and enjoyable and a great learning experience*
- *It has given me the chance to develop techniques and skills I will need for my PhD*
- *My placement put me off doing a PhD but now I think I will give it a go*

## And some more comments.....

- *The amount of time that had to be put in was a lot greater than the amount that we were expected to do*
- *Time available for the project was short, much more time needed to do a project effectively*

# Does it work?

## External Examiner comments...

*“ these carefully designed ‘teaching’ research projects can be more informative to a student than a poorly-planned or speculative ‘real’ research project. They also provide a more level playing field for the assessment of the abilities of these students.”*

## Peer Response...

Following dissemination of this strategy at the departmental meeting, 4 colleagues have used it in their own projects.

# Lessons learnt and some tips

- **Preparation**

  - Carefully planning and choosing projects that optimise output is vital*

- **Communication**

  - Teaching technicians (for practical scheduling etc),*

  - Students (choice of projects given at least 2-weeks in advance),*

  - Postgraduate demonstrators (detailed briefing / debriefing sessions)*

- **Regular meetings with student teams to go over problems, discuss results and ways forward**

- **Limited by the teaching lab capacity**

- **Managing student expectations of research output**

- **Integration of large cohorts of overseas students**

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