



**UK CENTRE FOR**

**bioscience**



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# UK Centre for Bioscience

**Dr Stephen Maw**  
**Academic Advisor**

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*Supporting teaching in higher education to improve student learning across the Biosciences*



# Overview

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- The Centre perspective
- Publications
- Other activities



# Background

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- Practical work is one of the Centre's key priorities
  - Dealing with empirical subjects
  - Clearly benefits of learning by doing
  - Subject-specific
  - Under threat
    - Unit of resource
    - Timetabling
    - Encroachment of Generic skills



## Background II

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- Opportunities
  - Technological advances
  - Industrial voices
  - Room for improvement



## Background III

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- Challenging questions
  - Limited unit of resource: which practicals and to whom?
  - What are we teaching (LO)? niche skills?
  - Repetition reinforcement; learning by mistakes
  - Where's the inspiration?



# Activities

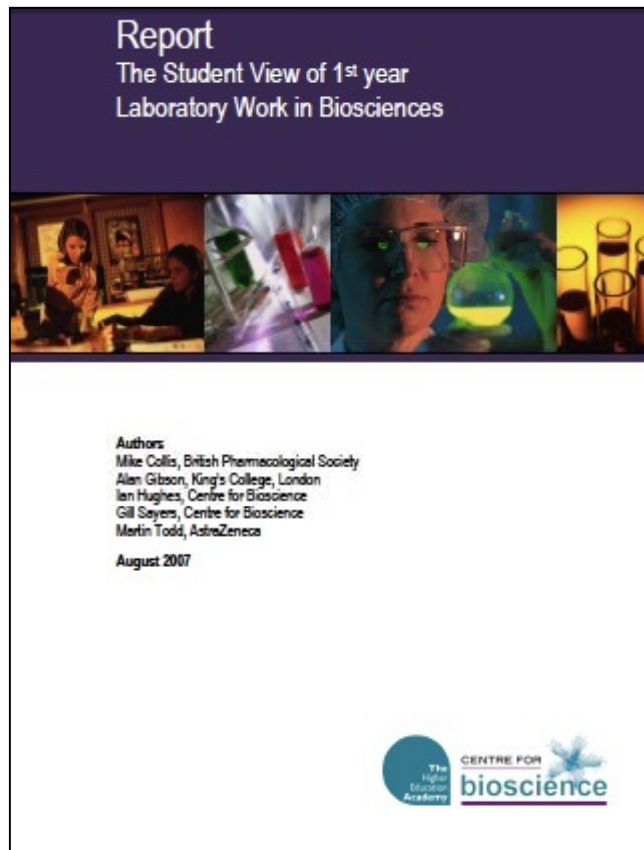
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To support practical teaching and further inform debate we've

- Pressed for strengthening of the Biosciences Benchmark statement
- Undertaken surveys
- Organised events
- Produced reports and publications



# 1<sup>st</sup> Year Practical



- Survey of 9 UK universities
- Staff and Student views
- Replace repetitive, boring practicals with challenging enquiry-based exercises around the scientific method



# Response

- Centre workshop
- Communication between different stakeholders
- Dynamic Lab/FieldManual
- Awareness raising
- Identification of good elements
- Sharing

**REPORT**  
1st Year Practicals: Their Role in Developing Future Bioscientists

A report of a workshop for invited participants organised by the Centre for Bioscience and sponsored by AstraZeneca Pharmaceuticals and the BBSRC Weetwood Hall, University of Leeds, 7-8 April 2008

Published June 2008  
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The Higher Education Academy logo, Centre for Bioscience logo, AstraZeneca logo, and BBSRC logo (Biotechnology and Biological Sciences Research Council).



# Commissioned Work\*



- Survey of student views on good/bad and exciting interesting practicals (1547)
  - Australia, England and France
  - The work reports remarkable consistency across courses, unis and countries
- \* Copy in delegate pack



# Journal Articles

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## Current Trends in Laboratory Class Teaching in University Bioscience Programmes

- exploit computer-based approaches
- encourage enquiry-based learning
- involve students in cutting edge research during scheduled undergraduate laboratory classes

■ No 8 in ref list

## The Role of the Postgraduate Student in Delivering Bioscience Teaching

- Tradition using post grad demonstrators
- No significant increase
- Some training (variable!)
- Staff satisfaction

Jon Scott and Stephen Maw (2009) The Role of the Postgraduate Student in Delivering Bioscience Teaching, *Bioscience Education*, 14-3 available at

<http://www.bioscience.heacademy.ac.uk/journal/vol14/beej-14-3.aspx>



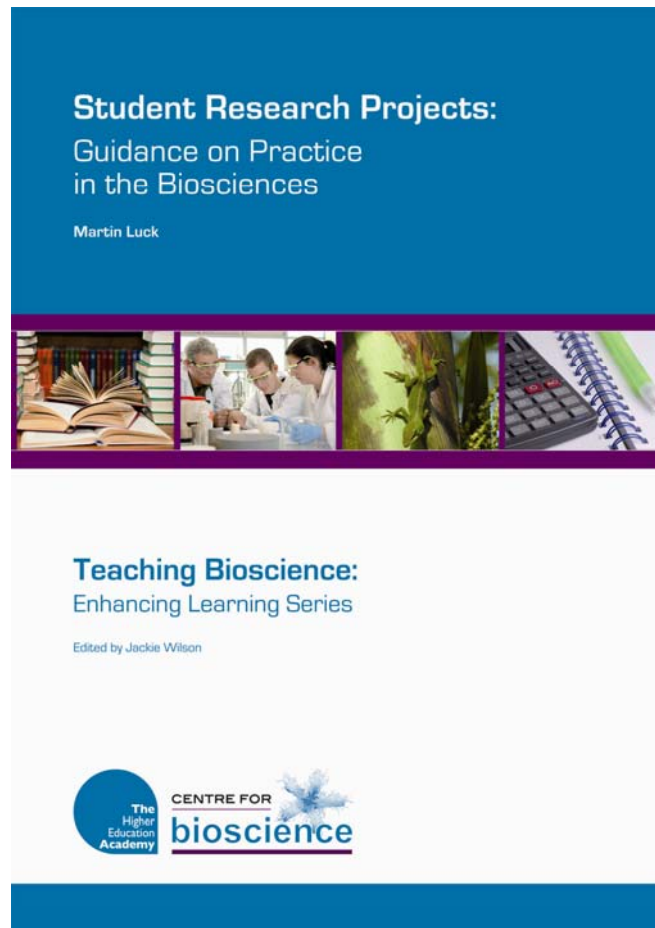
# Problem solving



- Report workshop Dec 2008
- Introduction to the topic
- Series of observations and recommendations
- Case studies



# Student Research Projects



- Outlines pedagogic advantages
- Looks at different form of FYP
- Assessment
- Bioscience Case Studies