

The Differentiated Learning Forum in 2007 brought together practitioners and those interested in differentiated learning to discuss stretching able students. This event aimed to take forward differentiated learning within bioscience higher education with presentations on different aspects of stretching able students and new projects focussing on stretching the able. The day contained a mixture of formal presentations, opportunities for discussion and practice sharing and informal swapshop contributions.

“Excellent opportunity for discussion and reflection”

“Interesting talks and prompted a lot of ideas”

“Very useful to hear what others are doing and to feel there is a “green light” to start building in opportunities for the more able students”

Welcome and introduction to the day

Katherine Clark, Centre for Bioscience, opened the day with a brief summary of the Differentiated Learning Forum in 2007 and how this event was intended to build on the success of the Forum in raising awareness of the stretching of able students and giving delegates an opportunity to share practice.

Keynote: Stretching able science students in school – some implications for higher education *John Gilbert, University of Reading and King’s College London*

John set the scene for the day with a talk reflecting on giftedness in science education. He discussed identifying gifted students and gave his thoughts on why giftedness can go undetected and why students may not engage. Drawing out examples from schools John described some of the characteristics of gifted students and the provision that may be made for them. Within higher education John advocated enabling students to undertake genuine enquiries and research and acting as closely as possible to “real scientists” to encourage all students as well as the more able.

Undergraduate Research Opportunity Programmes (UROP): Stretching and developing future researchers *John Creighton, CETL AURS (Applied Undergraduate Research Skills)*

UROP schemes enable undergraduate students to undertake research projects within a higher education or industrial setting during, for example, the summer holiday. John described a number of these schemes, how they are funded, the number of students undertaking them and the types of research projects students complete. He described how the UROP scheme at the University of Reading had been set up,



including management and funding of the scheme and went on to discuss some of the benefits for students including the opportunity to “think and work like a scientist”, enhancing research skills prior to final year projects and career clarification.

The use of tutor coursework feedback by high achieving and non-high achieving students in higher education

Paul Orsmund, Staffordshire University

Paul described a study in which he and colleagues had been investigating how students use the feedback they are given. Higher achieving students were often more reflective, they used the “essence” of the tutors feedback and self assessment, where as the non-high achieving students were more inclined to do exactly what the feedback told them to, there was little in the way of self-assessment. The non-high achieving students were also using feedback in a more form orientated way, i.e. using it on a similar task in the future, where as the high achieving students were function orientated – following the guidelines and learning outcomes.

Development of an individual approach to university learning in the biosciences

Debbie Bevitt, Newcastle University

Undergraduates arrive at university or college having done different subjects and with variable understanding of topics, Debbie discussed how first year students arriving at Newcastle University were given short tests to look at their writing, mathematical and biological knowledge and skills.

Students with lower scores were given advice and information on where to find support. Those who achieved highly in the test of biology knowledge were recommended to take part in “Biomedicine plus” a programme of research lectures aimed at first year undergraduates. Students found the lectures interesting and accessible and also valued the “scientist biography” at the start of the lecture, as it raised awareness of career paths in research.

Debbie also discussed the laboratory assistant scheme, where second year students were given the opportunity, through a competitive application process, of undertaking part-time paid work in labs during term time.

A blue rectangular box containing the text "Biomedicine+" in white, italicized font.

Workshop: stretching your students

Julian Park, Centre for Bioscience and University of Reading

Julian’s workshop asked delegates to consider how they might stretch their students and also consider how the more able students could be stretch and rewarded on a national basis. Following lively discussions the idea put forward was a Bioscience Student Conference, at which students could present their work, network with other students, take part in “community science” and be rewarded for their work. Notes from the workshop are available to download from the event report page.

Swapshop

Short, informal contributions from delegates

- **Academic Progress Review – Can it be more than a pat on the back?** Steve Rutherford, Cardiff University, described how the academic progress review was used to support those students doing less well on a course and also to congratulate and reward those succeeding. After review by academic staff students received a letter either asking them to come in for a chat with tutors, an encouragement to work harder to move up to the next level or a congratulatory letter and a certificate of merit.
- **Opportunities for students to publish**, Julian Park, University of Reading, spoke about how enabling students to publish their research work can stretch them and give students something to aim towards. He spoke about the variety of undergraduate research journals available, both institution-based and national, and then moved on to talk about Bioscience Horizons



Reflections on the day

Chris Baldwin, Newcastle University

Chris rounded off the day with his thoughts and comments on the day. Chris attended the Differentiated Learning Forum in 2007 and he reflected on how the consensus had changed, from wondering whether stretching more able students was something that should be done, to something that was being implemented in more higher education programmes.

Chris also reflected on the main themes discussed during the day, including identifying the more able students, how students change over time, thinking about how stretching able students can be built into the curriculum, how we can give credit and recognise the more able (perhaps a role for transcripts).