

Creativity in the Sciences University of Glasgow 29<sup>th</sup> April 2009

## Delegate report

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## **Personal Overview**

This event appealed to me because of the theme and the diverse backgrounds of the speakers. I wasn't disappointed. The speakers were all confident, knowledgeable and entertaining and I certainly learnt some new things and ideas to introduce to some of my teaching. Also, events of this type provide validation of strategies that we, as lecturers, already employ. I think this is the most useful outcome. Higher Education appears to be centred entirely on enhancing the student experience and perhaps not explicitly on the lecturer's experience and job satisfaction. Hopefully we all came away from this meeting with renewed confidence and look forward to engaging our students with approaches we are comfortable with, be that logic games or, in my case, poetry.

The venue and catering arrangements were excellent. The event was very well organised and kept to the timings and the atmosphere friendly.

All the speakers engaged with the audience and the audience participation exercises were well received – though, a pity that there wasn't time to debrief on the drink's can drawings. In fact, all the speakers seemed to have prepared more material than there was time to deliver.

## Programme

- David Adams welcomed us and set the scene for the day, introducing the work of the Centre for Bioscience and expressing the thought that students utilise only 10% of their creative potential.
- Peter Childs delivered an interactive session on *Creativity in Interdisciplinary Environments* which included lots of definitions of creativity and audience participation exercises.

The meaning of the term *creative* was explored with examples from painting, ancient and modern architecture and an interesting link to crime where it was mentioned that criminals may be amongst some of the most creative thinkers. We were introduced to some examples of group warm-ups designed to approach tasks in a creative way. This included a drawing exercise in which we each drew a drink's can in various degrees of stress – after being stood on by an elephant for example. This stimulated conversation amongst us, but unfortunately, there was no time to learn the reason for this exercise.

The conditions which encourage creative thought were given, including the idea that stress is an inhibitor whilst ideas tend to come when we are not concentrating.

 Carol Wakeford reviewed some ideas for enhancing creativity in her session entitled *Evolution of Ideas: Tools for Creativity*. The title encompassed an acknowledgement of the bicentenary of Darwin's birth, which was highly appropriate in the context of provocative and challenging creative thinking.

We were introduced to a selection of strategies to use with student groups to stimulate novel solutions to problems and some suitable for Enquiry-Based Learning as resources for practicals and tutorials.

Carol explained that the creative process may be split into: idea generation, using for example, lateral thinking games and visual prompts – which were tried out on the audience by distributing postcard photographs and we were asked to choose one to remind us of our first interest in science; idea incubation, mind mapping and storyboards to carry ideas forward; and idea maturation, using for example SCAMPER.

• Kevin Byron presented **A Question of Creativity** in which he detailed some tools which can help to frame questions in ways that may lead to a more creative approach to doing science, particularly scientific research.

The idea that creativity is the ability to make links between disparate pieces of information was explored along with the approach that idea formulation has three components, infancy, growth and maturity following a sigmoid curve. It is thought that the way a question is asked can affect the outcome and perhaps hamper creative thought, and tools for framing questions were detailed. These included Osborn-Parnes Creative Problem Solving and SCAMPER. Our 'creative ability' was tested by being asked to identify a picture in close-up which was gradually zoomed out to reveal a cow – obvious when we were told!

• Swap shop sessions:

Kevin Wells presented **Student-led Design Work through PBL** which gave details of a first year laboratory course designed to re-engage students with lab classes which were thought to lack creativity and gave no scope for personal expression.

The three week cycle involved the students downloading information, which they then learnt and presented to others, before refining and performing the lab work in week 3.

Roger Downie presented **Student Creativity and the Research-Teaching Link Agenda** giving details of a mentoring scheme introduced between post graduate researchers and first year undergraduates.

The first years were asked to communicate the researcher's work in three ways – a newspaper interview, a poster for the general public and a TV programme.

Lee Beniston presented **Student Perspectives on Creativity** in which he told us about the business he created with friends whilst studying Alevels and this informed his choice of university course.

He felt that there was little scope for creativity outside the module that had attracted him to Leeds, and felt that HE needs to assign more importance to creativity.

David Adams presented *Promotion of Creativity: a Web-based Approach* where we used the programme developed for the Creativity in the Biosciences website.

This interactive programme introduced users to leading researchers who summarise their work and then the user is asked to consider problems and challenges. This is then developed in group sessions on the website where all group members can engage in creative approaches to problem solving. Prizes were given on the day to the group voted the most creative.

• **Reflections of the day**. This was very positive with delegates open to the idea suggested by David that the idea of creativity could form the basis of a conference in the future. There were requests for the reports of this and other Centre events to be published to form a resource for the future. Examples of best-practice were also wanted. The view was expressed that the multidisciplinary nature of the event was a good thing. Finally, it was thought that science education **is** creative, but the teaching of it sometimes not.