How to do a neuroscience lab with 120 students

Tom Stafford and Chris Martin, University of Sheffield

The mission: revamp the lab classes on the first year neuroscience course. The labs presented something of a conundrum - what neuroscience can you do with 120 first year psychologists? Their large number and relative inexperience precludes many activities.

Our idea: run a conference poster session. Presenting a poster is a vital skill for neuroscientists and psychologists, and also teaches equally vital skills for other academic and professional activities, including: learning to summarise, working in groups, presenting material visually and asking questions.

The process: in the first lab session we divided students into groups and assigned each group a recent neuroscience research paper. To assist with comprehension of the paper we also provided a summary of the research that had appeared on BBC Online. This had the added benefit of ensuring that we picked research that had some instant popular appeal. Before the second lab the students emailed their panels to us (six per group; one each), which we printed out. On the day of the conference students collected their posters and set about finding their allocated poster board and pinning up their posters. We gave each student a task list of possible questions and told the groups to divide up their time between wandering around the posters asking questions and staying by their posters answering them. For added conference atmosphere, we invited the rest of the department’s staff to come along. As you can see from the pictures, we created a genuine conference atmosphere - to the extent that during feedback some students complained that it was too crowded, just as many researchers feel during the poster sessions at large conferences.

The result: asking students to design a poster and then look at all the other examples provided them with a dual perspective on the business of designing a poster (perhaps we should ask them to read each others’ essays as well!). The public consequences of the group work meant that, even though the posters were not assessed, there was important feedback to those groups that failed to work together and hence had to stand beside an incomplete or incoherent poster during the session. The semi-structured question task got the session started and provided some experience of asking questions, which is a vital intellectual skill and something one needs to practice, both for things in which one is interested and for topics by which one is perhaps not so fascinated. For the tutorial after the lab we asked postgraduate tutors to lead a discussion on good and bad practice in poster design, and encouraged them to facilitate some discussion on how they thought the session had gone.

For more information contact t.stafford@sheffield.ac.uk or visit: http://www.tomstafford.staff.shef.ac.uk.