Exploring Practical Teaching in the Biosciences Workshop

23rd May 2023, University of Sheffield

Attendees

~35-40 participants attended the in-person workshop, from institutes across the north of England, including Leeds Beckett University, Manchester Metropolitan University, Nottingham Trent University, Sheffield Hallam University, University of Bradford, University of Leeds, University of Sheffield and University of York. Participants teaching disciplines included Anatomy, Biochemistry, Genetics, Microbiology, Molecular Biology, Neuroscience, Physiology and Plant Sciences.

Sponsors

In addition to HUBS funding, this workshop was supported by an Institutional Engagement Award from The Physiological Society.

Aims

There were two overarching aims of this workshop:

1. To discuss the current challenges and opportunities within practical teaching, with a particular focus on delivering engaging and inclusive practical experiences to larger student cohorts.
2. To discuss the potential for setting up a regional network to discuss these challenges and many others that we’re all facing in learning and teaching on a more regular basis.

Summary

The schedule for the day is on the workshop [website](https://sites.google.com/sheffield.ac.uk/northernbiosciencesteachingnet/northern-biosciences-teaching-network/events/practical-teaching-in-the-biosciences?authuser=0).

The workshop commenced with an interactive session on embedding inclusivity in practical teaching, led by Dr. Fran Henshaw from the University of Sheffield and Dr. Pip Garner from the University of Bradford. The workshop began with a discussion about what inclusivity means for the various participants in relation to practical teaching. With some best practice examples from the session leads, participants made wide ranging, useful comments on their own challenges and best practice on a jamboard which can be accessed in the resources for this workshop.

This was followed by a keynote talk by Dr. Vanessa Armstrong from the University of Newcastle, focusing on practical teaching in large multipurpose labs. The talk gave everyone a feel for the day to day practicalities of teaching in a ‘super lab’, with an excellent contribution from the lead technician, Christine Aldridge, about the logistics from a technical perspective. For many participants, this was extremely valuable as they plan their own transitions into such large multipurpose labs. Next, there was an introduction to the concept of a regional biosciences teaching network which led to some enthusiastic discussion over lunch!

In the third session of the day, Dr. Chris Randall (University of Leeds) gave a talk full of handy tips for creating whole year research projects to replace traditional stand-alone lab classes for first and second-year students. He highlighted that the project outputs feed into ongoing research within his institution. Dr. Liam Baggley (Manchester Metropolitan University) described how a skills passport has increased engagement across the practical physiology courses and improved clinical skills literacy in his students. Dr. Hannah Campbell discussed her work around redefining the curriculum at the University of Leeds, including the challenges associated with embedding topic based practicals within a year long skills module. Dr. Laura Corns and Dr. Rebecca Barnes provided evidence for increased preparation for and confidence within practicals using the online learning platform Lt. Finally, Dr. Matt Bawn gave a thought provoking talk about a programme approach to teaching data skills, the success of live coding workshops and the challenges regarding scaling these up to large cohorts.

To cap off the day, an interactive session on developing research-based group projects was led by Dr. Dave Turton from the University of Sheffield. Participants were able to bring together the considerations from the day's previous sessions to consider innovative solutions to meet the challenges of providing authentic research experiences to larger cohorts of final year undergraduate and Master’s students.

Outcomes

Following great enthusiasm for a regional network, Dr. Gordon Cooper is leading the development of the Northern Biosciences Teaching Network. Information about this can be found on [this website](https://sites.google.com/sheffield.ac.uk/northernbiosciencesteachingnet/northern-biosciences-teaching-network) and anyone wishing to join the network should email Gordon via g.j.cooper@sheffield.ac.uk. If you would like to be the point of contact for your institution within this network, please indicate this to Gordon.

The initial plan for the network is to have a planning meeting as soon as possible with University contacts to think about future in person events. There are also plans for a bigger online coffee meeting event over the summer with a couple of presentations and some discussions to work on community building and sharing best practices.