

This one-day event was aimed at staff from bioscience and other science disciplines who are interested in developing their teaching activities and their understanding of student learning with a view to research leading to publication. The day provided attendees with an opportunity to consider educational (pedagogic) research in a scientific context and how this relates to their own practice. The programme included a mixture of presentations and opportunities for discussion and a swapshop element to allow individuals to share early experiences of venturing into the educational research and publication arena.

Pedagogic research in a science context

Ian Hughes, Centre for Bioscience & University of Leeds

Using himself as a case study, Ian set the scene for the day and covered the issues involved in getting started with pedagogic research, including funding, how educational research differs from scientific research and publishing. He emphasized that most have to introduce changes to teaching at sometime or other (i.e. introduce an intervention) so why not think write-up from the start and publish the work?

Collecting the evidence - an introduction to research methods and methodologies

Mike Joy, University of Warwick

Mike did an excellent job of guiding delegates through the various pedagogic research methods that are available as well as de-mystifying some of the language used. He also touched on the ethical considerations of carrying out investigations on people.

Reasons for undertaking qualitative pedagogic research

Paul Orsmond, Staffordshire University

Paul introduced qualitative research and explained that qualitative analysis is required in addition to quantitative analysis to get the richness out of the data available to researchers. He included tips for getting started in carrying out your own research, places to go for help and raised the topic of reliability and validity.

Getting published - writing papers for pedagogic research journals

Chris Willmott, University of Leicester and former Editor-in-Chief of the Centre's Bioscience Education e-journal

Chris' talk started with seven reasons why pedagogic research papers get rejected to help delegates avoid such mistakes. He continued by explaining why and what to publish, as well as strategies to research the pedagogic literature and suggestions of which journals to publish in.

Discussion session

This session was facilitated by Steve Maw (Centre for Bioscience) and focused around the topic 'Design of research investigations'. Delegates split into groups and discussed how they would

go about researching the questions presented in one of three different scenarios. The scenarios along with the rationale and linked papers are available below:

Swapshop

The Swapshop was chaired by Julian Park and gave contributors an opportunity to share practice, ideas and experiences of getting started in educational research in the sciences.

Use of questionnaires in pedagogic research - Janice Harland (Liverpool John Moores University) described how she used questionnaires in pedagogic research and gave tips on how to avoid the potential pitfalls as well as advice on what did work well. She covered everything from question design to questionnaire distribution and collection.

Putting Focus into Student Feedback - Ruth Bevan (University of Leicester) concentrated on focus groups and presented her experience on the use of these groups to expand on data obtained from questionnaires. She covered what worked for them and things they would change.

Example involving the use of interviews - Paul Orsmond (Staffordshire University) shared his experience of using interviews in pedagogic research. He covered everything from planning, data collection, analysis and report writing.

Third year experience in the Faculty of Science - Alison Kelly (Kingston University) reported findings from a study on the third year experience in the Faculty of Science. They used a questionnaire to determine how prepared students were for their third year studies and for the future.

Personal & Academic Support System and Interventions with at risk students - Sue Robbins (Oxford Brookes University) presented her findings from an intervention study: Personal & Academic Support System and Interventions with at risk students. They identified first year students with poor performance in their semester 1 assessments and put in place intervention measures and additional support for their studies.

Related Resources

Further information on pedagogic research in the biosciences is available from http://www.ics.heacademy.ac.uk/resources/pedagogical/cs_research/