
Co-design of an employability-focused workshop for first year Physics students

Employability for a Physics Student

**You're a final-year physics student.
You've got to the interviews.
You're sitting in front of an interview panel.**

**Then they ask: "Tell us about a time you
solved a difficult problem."**

What do you say?



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The problem

Student's awareness of their own skills

Student's ability to articulate their skills and experience.

Student's understanding of the interview process

Learning Objectives

Module Background

Previously, students took a thin, 20-credit laboratory module and a 10-credit skills module in semester two.

Restructured to a new 30-credit laboratory module, with skills embedded throughout and **two dedicated four-hour workshops on employability and careers.**

Module Background

FG/PH15720

- Demonstrate practical competence and accuracy in carrying out experimental procedures including measurement, use of scientific instruments and recording of results.
- Produce a clear written scientific report including theoretical background, experimental description, presentation and analysis of results, and interpretation and evaluation.
- Identify types of uncertainties in an experiment and determine error propagation.
- Demonstrate the ability to work with others in a considerate and co-operative way.
- Respect and acknowledge the intellectual property of others.

FG/PH12910

- Analyse data using a spreadsheet to perform calculations.
- Produce summaries and charts of the data in the spreadsheet analysis.
- Write a program in a procedural computer language.
- Apply software packages to prepare documents for presentation to a wide range of audiences.
- Identify careers for Physicists and skills required for future employment.
- Explain a topic in Physics in an oral presentation.
- Recognise diversity, ethics and sustainability in the physical sciences.

Module Background

FG/PH15030

- Demonstrate practical competence and accuracy in carrying out experimental procedures, including measurement, use of scientific instruments and recording of results
- Produce a clear word-processed scientific report including theoretical background, experimental description, presentation and analysis of results, and interpretation and evaluation.
- Discuss work in an oral presentation.
- Identify types of uncertainties in an experiment and determine error propagation.
- Analyse data using a spreadsheet to perform calculations.
- Demonstrate the ability to work with others in a considerate and co-operative way, respecting and acknowledging the intellectual property of others. Recognise diversity, ethics and sustainability in the physical sciences.
- Participate in a careers skills workshop; produce a CV and participate in a mock assessment centre activity.

Learning Objectives

Our aim was that by the end of the workshop students would have:



Identified and articulated their disciplinary and transferable skills



Responded to interview questions using specific evidence



Reflected on their own performance

Pedagogical framework



Authentic learning



Experiential learning



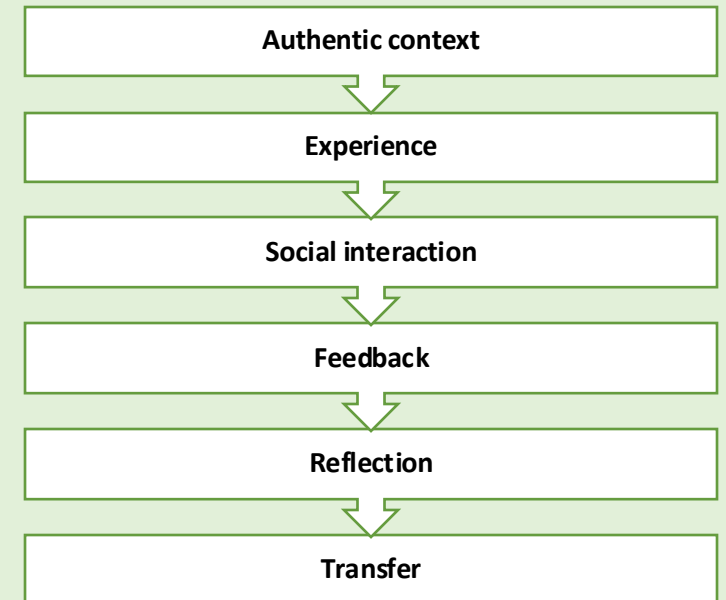
Active learning



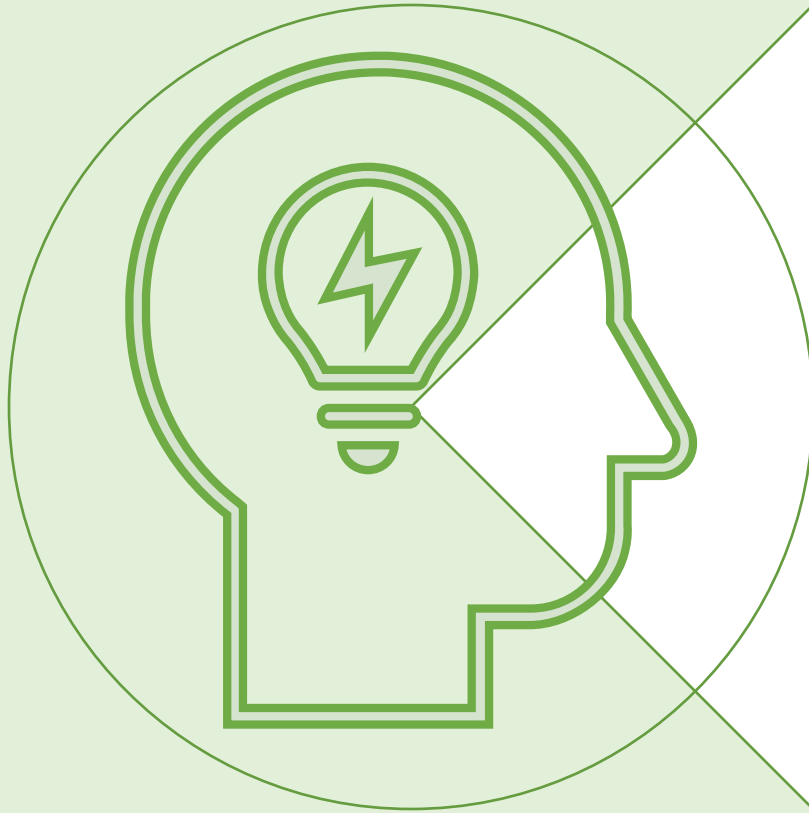
Social learning



Reflective practice



Pedagogical framework



Authentic learning and assessment

- Simulated a professional context
 - Creating a CV and using AI to improve it
 - Preparing for and participating in an interview (in both roles)
- The job descriptions were real, attainable summer internships
- We set the interview questions for each role.

The workshop

Info

- Welcome from Module Coordinator (Rachel) and Careers (Manon)
- Presentation on Careers and Employability resources

Individual assessment

- Guidance on CVs and AI CV checking software
- Individual task: produce a CV, upload to CareerSet, and make improvements

Group assessment

- Guidance given on interviews and the STAR method
- Group exercise: role-playing interviews

Wrap up

- Reflection on the session in groups and as a class
- Reminder on submission of CV assignment to Blackboard

Post-workshop moderation on scores

Example

POSITION 1

Dark Matter Summer Placement

- Deadline: March 8th, 2026
- Starting: June 2026
- Salary: £23,493 (pro rata)
- Duration: 12 weeks
- Location: Didcot



Science and
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The position will be based in the Particle Physics Department at RAL. The main responsibilities will include:

- Learning about new experimental concepts for dark matter detection.
- Analysing experimental data/simulations.
- Working with experimental hardware in the RAL cryogenic laboratory.
- Attending and speaking publicly at weekly local team and experiment meetings.

Interview questions

1. This placement involves learning new experimental techniques and concepts. Describe a time when you had to quickly learn a new scientific or technical concept? How did you approach it?
2. What topics in your Physics degree have you enjoyed most so far, and why?
3. Tell me about a challenging problem you've worked on during your course. How did you approach solving it?
4. Have you used any data analysis software in your degree so far? Can you describe what you did and what you learned?
5. Physics often involves working with others. Can you give an example of when you worked in a group or explained your ideas to someone else?

Ffurflen asesu cyfweiliad / Interview Assessment Form

Ymgeisydd / Candidate:

Swydd / Post:

Sgôr / Score	1	2	3	4
Ar y cyfan:	gwael	derbyniol	da	gwyb
Overall:	poor	adequate	good	excellent

Cwestiwn / Question 1: Sgôr/Score

The Interviews

What happened?

- They took the role-play seriously
- They supported each other
- They learnt from each other
- They ended the session more positive about their skills and experiences

Why did it work

- We had built trust
- It was relevant to them
- They felt prepared
- The questions were set by us
- It was realistic – the jobs, the questions, the scoring

What would we do differently?

- Assess the reflection
- Repeat the exercise a year later with graduate roles

Student response

"I didn't realise I had so many skills already."

"I wouldn't have applied for an internship, but now I will."

"It was much harder asking the questions than being interviewed!"

"I couldn't think of any skills at first, but by the last round I had loads."

"I actually enjoyed that!"

Limitations

Authenticity: A classroom interview isn't a real interview.

Equity: Some students may have previous interview experience while others don't.

Anxiety: Role-play can be uncomfortable for some students.

Feedback quality: Peer feedback isn't automatically useful.

Transfer: Students may enjoy the exercise without necessarily transferring the learning to a real interview.

Key Take Away

It isn't about teaching students to be “employable”. This workshop aimed to help them **recognise, articulate** and **demonstrate** the value of what they already know at this point in their student journey.

Authenticity creates relevance

Experience alone isn't enough

Employability can be disciplinary

