

Skills Development with RESILIENCE partners

A case study with the University of Glasgow



RESILIENCE

UK Medicines Manufacturing Skills Centre of Excellence

+ Context to this case study



MSc Industrial Biotechnology students from the Medical, Veterinary, and Life Sciences Graduate School of University of Glasgow recently attended a course delivered by RESILIENCE partner, Heriot-Watt University's FlexBIO Industrial Biotechnology Innovation Centre.

The course focused on developing advanced technical and industrial skills in bioprocessing and biotechnology, aimed to enhance workplace readiness ahead of the postgraduate students MSc placements. This was delivered through a mix of in-person and virtual reality (VR) immersive learning experiences.

In this case study, hear from Jed Lennox, Teaching Fellow at University of Glasgow who organised this experience for his students, including examples of testimonials and images that students have published on LinkedIn.

+ Working with RESILIENCE

In this case study, hear from Jed Lennox, Teaching Fellow at University of Glasgow who led on organising this experience for his students, and testimonials and images that students have published on LinkedIn. On exploring Jed's experience of working with RESILIENCE, he noted...

"The experience with RESILIENCE at FlexBIO was excellent, the virtual experience of setting up the bioreactor followed by in depth descriptions with the real thing really helped the students with their understanding and that showed when they got the opportunity to put one together at the end of the day.

RESILIENCE provided access to equipment (virtually) that I would not have had the chance to give students the experience of otherwise."



The students that attended the visit and used the RESILIENCE resources have gone for an industrial placement in India and I think that this session gave them some more confidence and a good base to start from when they got there.

+ Hear from those who attended



Cressida Neola Menezes, student from University of Glasgow stated...
“Our day started with the RESILIENCE team and an immersive VR training on assembling a bioreactor, followed by a VR session exploring how the cell works! It was truly enriching to see how digital tools can be utilised for training and developing skills. We then toured around the facility to learn about small- scale and large-scale fermentation as well as the downstream processing. This indeed was a valuable learning to see the theory I study in the classroom being practiced in the real-world, which helped me better connect the bridge between the two! We also got to visit the mammalian cell culture lab where we assembled our own bioreactor!”

Nirupama Priyadarshini, student from University of Glasow quoted on LinkedIn:

“We recently visited Heriot-Watt University with FlexBIO Industrial Biotechnology Innovation Centre and it was such an interactive experience. Starting with RESILIENCE training us with VR bioreactor assembly, VR lab safety, and an “inside the cell” exploration was a fun way to connect concepts from class to real-life applications. Seeing demonstrations from flasks to industrial-scale upstream and downstream bioreactors really highlighted how theory scales up in practice. They named their bioreactors Alberto and Pablito. We also learned how to build mammalian cells bioreactors!

The team at FlexBIO made the visit even more engaging - their enthusiasm was clear at every stage, and Neil Renault’s mix of encouragement and humor made the session feel approachable while still insightful. It’s the kind of environment that makes you want to focus on learning the craft itself, not just ticking boxes.

Big thanks to Jed Lennox for arranging this - experiences like this really make learning feel tangible and memorable.**”**



For others who are considering RESILIENCE enhanced membership but thinking that there may be barriers to this, Jed expressed that

“RESILIENCE is a great resource with so much potential and connects you with so many different experts who can help in so many different ways. I intend to use VR and collaborate with FlexBIO more to offer learning experiences and expertise that I cannot otherwise give the students.**”**

+ Interested in becoming an enhanced member?

✓ Sign up to our [free standard membership](#)

✓ Contact us to arrange a VR demo with your local partner. You can come onsite to us, or we can travel to you. Email us at: resilience-skills@contacts.bham.ac.uk.

✓ If you wish to sign up, your local partner will work with you to complete the membership paperwork.

✓ You will then receive your VR headsets, FourPlus Immersive and Bodyswaps licences and be given training in how to use these.

✓ If you are interested in the Workplace Accelerator programme(s), we will work with you to co-deliver the first cohort. You will then feel comfortable to roll this out yourself!

