

Title of case study

Embedding authentic Careers and Employability activities into the Chemistry curriculum

Staff Lead

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School/Department

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Name of course and module (if applicable) case study took place within

Key Skills for Chemists 3 (CHEM385)

Please briefly describe the activity undertaken for the case study

For over a decade, Chemistry has delivered embedded employability provision into our Year 3 BSc programmes (7.5 credits). For the past two years, however, the Chemistry and Careers & Employability (C&E) departments have developed a deeper working partnership, with C&E heavily embedding their expertise and resource into this Chemistry module to ensure students are presented with contemporary and relevant activities to help them develop their employability. We started with a new pilot version of the module but expanded this year to all year 3 students (125 students), whether BSc or MChem. The employability specific provision constitutes 75% of the module and includes a variety of activities directly linked with C&E including (but not exclusively): lectures; an assessment centre activity; video interviewing (SONRU); psychometric tests; visiting the careers studio; using LinkedIn materials.

How was the activity implemented?

1. Lectures: As part of a wider series involving external speakers, the lectures from C&E focus on skills articulation rather than CV writing, but also include sessions on resilience, the importance of social media, and commercial awareness.
2. Assessment centre: This assessment centre exercise is an interactive and technology driven authentic activity with the aim to use the knowledge and expertise from C&E to replicate, or closely replicate, graduate recruitment assessment centres, aiming to enhance the confidence of the participants by developing and practicing skills needed in real life situations. The session was

bespoke but using analogous examples from real assessment centres that were challenging, supportive and interactive. Since fully authentic assessment was not possible (we would need close to 50 assessors!), technology was implemented.

Activities included:

- individual psychometric tests to encourage self-reflection
 - group based hands-on activity (building a spaghetti/marshmallow tower)
 - group based situational judgement exercises (using Kahoot! for assessment)
 - a group presentation (recorded using FlipGrid for later assessment)
3. SONRU video interviewing (10% of module): C&E has training access to an authentic video interviewing package called SONRU. The questions presented to students are customisable and after trialling SONRU as a mini-task (see below) in 2017-18, SONRU became a core assessment during 2018-19.
 4. Mini-tasks (10% of module): An underlying theme of the module is personalisation. As such, students can choose from a range of small activities to suit them but need to evidence completion and write mini-reflections. Activities linked directly with C&E include, but are not limited to, the following:
 - Psychometric tests: C&E have a partnership with Graduates First psychometric services. Our students log on and are required to complete some verbal/numerical/logical reasoning tests.
 - Visiting the careers studio: Students must take a 'selfie' to evidence they've attended, and hopefully engaged with the careers coaches whilst there. Moving forward, they will have to take something meaningful to get looked at by the careers coaches
 - LinkedIn: C&E has thorough guidance on setting up a LinkedIn profile with students being required to achieve a minimum threshold (ie, 10 contacts).

Has this activity improved programme provision and student experience, if so how?

The four main indicators suggesting a positive impact on student experience are:

1. Engagement with C&E: Whilst influenced by the mini-task above, final year students had the greatest engagement with C&E within the Faculty (2017-18) and advice interactions increased by 500% from 2016-17 to 2017-18 (all years).
2. Current students: It became clear throughout the module that students were completing real-life video interviewing and assessment centre activities alongside this course and confirmed the authenticity of our activities. As part of the mini-task reflections it was evident students found the C&E coaches helpful and we'll be re-enforcing this next year.

Some quotes from current students:

- "From mini-tasks to mock video interviews the module instilled the importance of reflection as a vital tool to improve individual performance. It is a credit to the course that I was so prepared for recent job applications and my success throughout the various stages reinforces this. This module was arguably the most useful in my final year and in my opinion should be replicated across the university; peers from other faculties, who don't benefit from this type of course, support this" (Y3 BSc student).

- “The module was an eye opener... I wasn't aware that an assessment centre, psychometric tests or other aspects of the module would even be part of the employment process. The lectures ... have definitely made me feel much more confident... I found the SONRU video interview practise particularly useful as I had to complete one of these for a job a month later” (Y3 MChem student).
 - “It's such a relief knowing that the department are there not only to support you through your studies, but also there to help you with whatever steps you decide to take next” (Y3 BSc student).
 - “By having a module as part of my studies it meant that I was able to put time into this rather than letting the opportunities pass me by” (Y3 MChem student).
3. End of course surveys: Activities such as the assessment centre, video interviewing task, CV critiquing workshops and lectures (IW) are the best received activities.
 4. Anecdotal evidence: Traditionally we've had lots of feedback from students who realise the importance of our employability activities only after they've graduated, typified by the statement below. “I would just like to say thank you for teaching me how to reflect! Although I didn't believe you at the time, it is so useful. We have to do monthly reports ... Thanks to you I go in every month and my manager tells me how wonderful I am” (2015 graduate).

Did you experience any challenges in implementation, if so how did you overcome these?

No challenges faced for these aspects of the module. More widely, the personalisation aspect of the module and a big piece of group work requires careful timetabling to be feasible. The timetable team were very helpful and accommodating so good communication was essential.

Which Liverpool University Hallmarks and Attributes does this case study relate to (tick all boxes that apply)

Research-connected Teaching

Active Learning X

Authentic Assessment X

Confidence X

Digital Fluency X

Global Citizenship

How does this case study relate to the Hallmarks and Attributes you have selected?

Active Learning

The Assessment Centre, video interview, and mini-tasks are active learning experiences which encourage students to take responsibility for their learning and development via structured reflection or participation.

Authentic Assessment

The Assessment Centre, video interview, and mini-tasks are authentic graduate tasks which form part of the graduate recruitment process.

Confidence

Research suggests applicants who are unsuccessful in assessment centres may experience lower self-esteem and work ethic, reduced competitiveness and exhibit less self-development behaviour (Fletcher, 1991; Noe and Steffy, 1987; Thornton and Gibbons, 2009). Therefore, the assessment centre exercise is an interactive and technology driven authentic activity with the aim to use the knowledge and expertise from C&E to replicate, or closely replicate, graduate recruitment assessment centres, enhancing the confidence of the participants by developing and practicing skills needed in real life situations.

Digital fluency

The module incorporates elements of digital fluency via the use of Kahoot!, FlipGrid, SONRU video interviewing, and Social Media. Modern recruitment processes are continually evolving and it is our responsibility to adapt. C&E are up-to-date with modern processes and embracing their expertise is essential. Video interviewing is becoming prevalent across a whole range of sectors with the 2018 Institute of Student Employers revealing 49% of its members use video interviewing; including Chemistry-aligned recruiters such as Shell, GSK and AstraZeneca showing the authenticity of this activity. Social media offers the opportunity for students to engage with companies, and individuals within a company, that traditionally has not been possible. Recruitment via social media such as LinkedIn is on the increase so appreciating the power of professional social media is important.

How could this case study be transferred to other disciplines?

The Careers and Employability Department have a vast array of resources available to students from across the whole university. Whilst Chemistry has deliberately followed the route of a dedicated module, other departments could easily offer some of the activities completed in a formative manner as a way of improving student employability. Regarding the assessment centre activity, and considering Chemistry graduates enter a wide range of sectors, the assessment centre has a broad remit, offering the potential for it to be easily placed into any department in the University, either formatively or summatively, over 1-3 hours, with only minor adaptation.

If someone else were to implement the activity within your case study what advice would you give them?

Over the years the importance of having a clear introduction and scaffolding session for any Employability related module has become apparent. Encouraging student buy-in is essential (as is tutor buy-in, if required). Open-up communication with C&E early as embedding employability specific activities into curricula is becoming more commonplace, so demands on their time will increase. These activities could also be used in a formative manner, most of which directly from C&E, but our experience tells us that, rightly or wrongly, making such activities credit bearing is important for engagement.

References and recommended reading

Fletcher, C., 1991. Candidates' reactions to assessment centres and their outcomes: A longitudinal study. *Journal of Occupational Psychology*, 64(2), pp.117-127.

Noe, R.A. and Steffy, B.D., 1987. The influence of individual characteristics and assessment center evaluation on career exploration behavior and job involvement. *Journal of Vocational Behavior*, 30(2), pp.187-202.

Thornton III, G.C. and Gibbons, A.M., 2009. Validity of assessment centers for personnel selection. *Human Resource Management Review*, 19(3), pp.169-187.



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