

DivCHED IAC 2018 Travel Award Report – Jack Barbera

In August I traveled to the University of Sheffield in central England for the Varieties in Chemistry Education / Physics Higher Education Conference (ViCEPHEC). This annual meeting moves around to a different university each year and is described as the “leading national conference for chemistry and physics education at the tertiary level in the United Kingdom”.

<https://vicephec18.wordpress.com>

The conference draws chemistry and physics graduate students and faculty dedicated to improving higher education at their institution. Conference attendance is limited to ~150 and presentations took a number of forms (shown below). Notably, only two total hours of the program contained overlapping sessions (parallel talks), allowing all conference goers to participate in a majority of the program.

- Keynotes – 45 min. (+ 5 min. questions)
- Presentations / Parallel talks – 10 min. (+ 5 min. questions)
- Oral bytes – 5 min. total
- Posters – 2 hours (held over lunch)

In addition to the presentation programming, there were three ‘sponsored’ social events including: a meet and greet welcome BBQ on the evening before the meeting start, a networking event after the day 1 programming, and a conference dinner. Additionally, there were many ‘unsponsored’ social events (read – trips to the local pub) over the conference.

My ViCEPHEC Experience – I arrived in Sheffield, got checked into my accommodations and set off to the welcome BBQ. This was a great start to the meeting, allowing me to catch up with some UK colleagues and meet some new ones.

Prior to the start of the official programming on day 1, the Institute of Physics’ Higher Education Group and the Royal Society of Chemistry’s Tertiary Education Group (RSC-TEG) each held their annual general meetings. I attended the RSC-TEG meeting. The TEG chair (Dr. Glenn Hurst, University of York) guided the group in discussion of the group’s goals and initiatives, including ensuring that the group was inclusive of all aspects of tertiary education – not just those at the higher education level. The meeting sparked lively conversation from members and participants and was interesting to witness as the current chair of the ACS Chemistry Education Research committee.

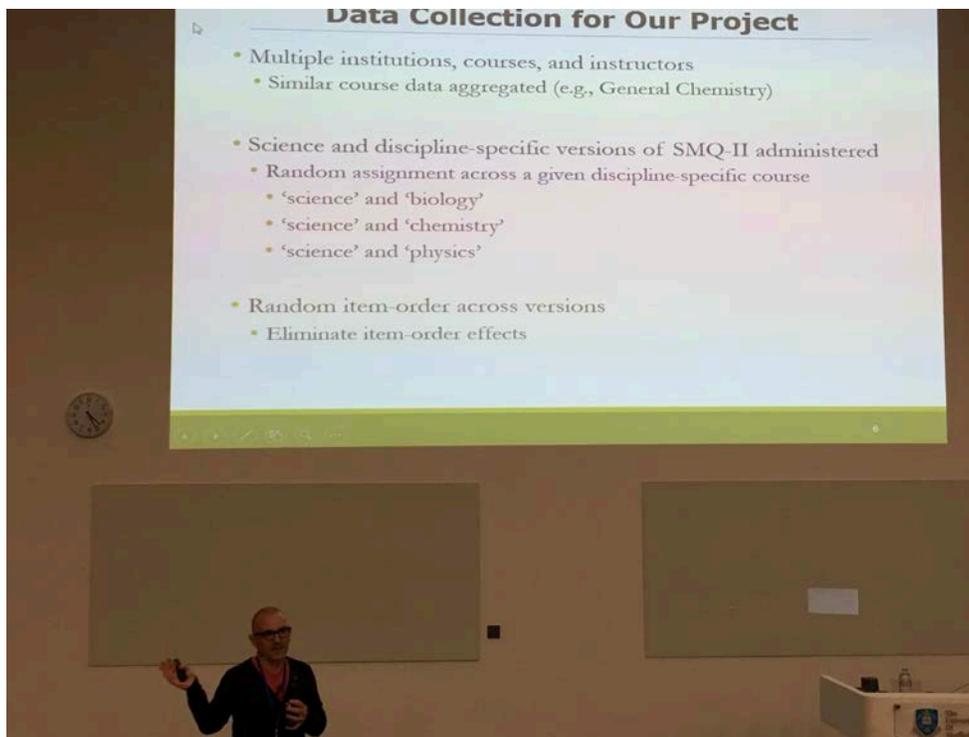
My talk, on measuring discipline-specific motivation within the classroom, was slotted into the ‘presentation’ session in the afternoon of day 1. I was grateful for this slot as it allowed me ample time during the remainder of the meeting to engage others in conversation. I enjoyed talking with some of the graduate students about aspects of instrument development, use, and validity/reliability studies as well as engaging in conversation with faculty interested in ‘best practices’ for the use of instruments in their classrooms.

I very much enjoyed the 'oral byte' presentations, in my mind I equated these to a poster session where everyone gets to hear your pitch. Each speaker was given 5-minutes maximum to provide an overview of their project. As no questions are allowed, everyone got to see a variety of work and then were encouraged to seek out the presenter later in the meeting to find out more or ask their burning questions. I frantically took notes so that I could find folks later.

Overall, I was impressed with the variety of work presented by a range of folks at different levels. As very few faculty members in the UK have dedicated 'chemistry education research' positions like many of us do in the US, the engagement of teaching faculty in education research is high. It was great to see their work and how they strive to improve the education of students at their institutions.

One of the goals for my trip to ViCEPHEC was to become engaged in the UK chemistry education community and to seek international collaborations for future work. During the conference I met separately with two faculty (one in physics and one in chemistry) to discuss two potential collaborations based on our common interests and needs within the UK. I am currently engaging in efforts to explore these collaborations, with intentions of building them into my upcoming sabbatical. Since the ViCEPHEC and my attendance at the RSC-HEC, I have also applied for membership to the Royal Society of Chemistry and am seeking opportunities to become involved in their education-based committees.

My presentation on day 1



Conference dinner at Kelham Island Museum



<http://www.simt.co.uk/kelham-island-museum>

The conference dinner at the end of day 1 was held at the Kelham Island Museum in Sheffield. This was an amazing place for a conference social event. When arriving, everyone was greeted with a glass of champagne and sent off to explore the museum's displays of the industrial background of the Sheffield area. Our exploration ended with a display of the working 12,000 horse power steam engine. It was impressive to see this engine in motion. Post-museum exploration everyone enjoyed some traditional British fare including a steak & ale pie with mushy peas.

One of the restoration shops in the museum



The most detailed penny farthings I've ever seen



Note: I would ride this around Portland Oregon (my home) if I owned it!

An amazing 'room sized' 12,000 horse power steam engine

