

Reimagining non-traditional Final Year Research and Honours Projects: Preparing graduates for the 21st Century workplace.

Organisers: Sue Jones (York St John, HE Bioscience Teacher of the Year 2020), Dave Lewis (Leeds), Michelle Payne (Sunderland).

This workshop was kindly jointly supported by HUBS and HUCBMS. Originally scheduled to take place at York St John University in May 2020, but due to the Covid-19 lockdown, it was rescheduled and delivered as three duplicate online workshops in June and July. The benefit of the move online was that we could accommodate far greater numbers of participants, 300 over the 3 workshops rather than 50 for the face to face version. The planned combination of short presentations and world-café style educational sandpits was retained, with the last sandpit on learning outcomes removed to enable the entire event to last no longer than 3 hours.

The maximum capacity of 300 registered, with approximately 220 actually attending from as far afield as the USA and Canada. Collectively, they represented the entire spectrum of UK and Eire HEIs, encompassing both Biomedical Sciences and the broader Biosciences programmes (membership of HUCBMS and HUBS respectively).

The aims of the workshop were to:

- Share Global good practice in Final year research, Honours or Capstone projects;
- Open colleagues eyes to the diverse range of projects/capstones opportunities available, particularly those not traditionally offered in the Biosciences;
- Facilitate the introduction of multiple formats of projects/capstones into Bioscience degree programmes across the UK and overseas;
- Share the co-created resources with all participants and HUBS / HUCBMS member organisations.

These aims were achieved by a discussion of the educational purposes of projects (led by Michelle), sharing of the revised RSoB accreditation criteria (Dave) and IBMS approved capstone/projects and draft updated accreditation criteria (Sue), exemplars of both traditional (for the Biosciences) and non-traditional capstone formats (Dave) followed by a group discussion and sharing of ideas for different/novel formats of capstones in educational sandpit breakout groups and subsequently a plenary session. These breakout groups were facilitated by Dave, Sue and Michelle to stimulate discussion. Learning outcomes which encompass all formats of capstone project and are fully compliant with both the RSoB and IBMS accreditation criteria were shared (Dave) before the last sandpit & plenary session, where scaffolding and support requirements of both students and staff were discussed.

Recordings from the workshop, resources shared by participants and additional resources created by Dave (ideas for capstone formats, collection of databases, collection of simulations, assessment criteria and student guidance) were shared with participants, registrants who were no longer able to attend, and others who expressed an interest. Subsequently, Dave created and shared with the community, a *"How to Do It"* guide covering 14 different formats of capstone and a student-centred *"Choosing your Capstone"*, focusing on skills developed, potential career pathways and what is involved for 15 different formats of capstone.

This series of workshops has had an unimagined and substantial impact, from the sheer numbers of participants from across UK Bioscience HE and overseas who registered and their excellent feedback:

"A really useful session, so good to see so many people sharing experiences and ideas. Thanks for all the materials too"
"Thank you very much, indeed for taking the trouble to organise yesterday's excellent seminar. The format was enjoyable, and the information was really useful. Thanks too, for compiling this comprehensive list of resources"

and willingness to embrace the concept of the capstone experience and incorporate multiple formats into their programmes, not only as a short-term response to the current Covid-19 situation, but as a longer term intervention to enhance their programmes and better prepare students for the diversity of different career pathways they go onto:

"We are offering "Computational/big data", "systematic review", and "critical review + grant proposal" as three additional (and remote) offerings. I'm hoping to make these permanent, along with introducing the other options"

These workshops form the basis of an article for the RSoB publication *"The Biologist"* in October 2020, authored by Sue.

The demand globally for the shared resources has also been exceptional, for example, over 1, 750 downloads from 50 countries in 3 weeks for the *"How to Do It"* Guide.

Finally, a big thank you once again to the RSoB, HUBS and HUCBMS for their support, and to colleagues for their engagement.

Sue Jones, Dave Lewis & Michelle Payne