

## **NERC Edinburgh Earth and Environment (E3) DTP – Student Advisory Report 21 December 2018**

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**Purpose:**      **Review of the E3 DTP through a cross-cohort student advisory panel**

*Panel Members:*      Corinne Baulcomb, Roseanne Clement, Guillaume Goodwin, Andy Griffiths, James Watt, Tom Tyldesley, Jamie Hunter, Gina-Maria Geffers, Tomas Liska, Jonathan Scafidi, Gergana Daskalova, Alice Drinkwater

### **Summary**

PhD students view the DTP positively. Particular areas that worked well were the writing retreats, the socials, the interactive Frontiers in GeoSciences sessions, the Overseas Research Visit Fund that is now available for international conferences, too. Broadly, our suggestions for improvements are: 1) widening the breadth of training opportunities (both for careers in and outside academia), 2) making the first year training sessions opt-in with a minimal required number of attended sessions, 3) improving information about training/funding opportunities and how it is communicated to PhD students, and 4) making significant improvements to the current E3 DTP website.

### **Training**

Overall, the training is considered valuable. We suggest emailing students from all years with the information on when the different NMDM sessions are happening, so that people not in their first year are aware they can go to NMDM, too. People thought that NMDM is good in terms of seeing the variety of tools available. A recurring problem is that people feel like there is a lot of training crammed in at the start of the PhD, but then later on the training is very infrequent. We understand that it is a difficult balance between allowing people to see the tools available and overwhelming them. We discussed possible alternatives (see suggestions below). Additionally, we suggest that an email is sent out to remind people that they can also suggest training sessions, and that information should also be on the DTP page in the PGR Hub on Learn. We also think that it would be very valuable to have training opportunities for careers in academia too (e.g. writing fellowship applications), especially given that >80% of DTP PhD students go on to do research-related jobs.

### ***E3/E4 DTP***

We are concerned about the emphasis on “student-driven” training (in both the E3 and the E4) as that poses a lot of pressure on 3<sup>rd</sup> and 4<sup>th</sup> year students to train their younger peers at a time

when they are very busy and generally stressed. Since that didn't work out this year for the previously proposed training session, we caution the adoption of this approach. We are also sad to see the Nature Writing Workshop go as many people thought of that as the best part of the DTP training as a whole, although we do understand it would be expensive to keep it.

#### *Writing retreats and additional training*

The writing retreats were very well-received and we encourage more of them. Same positive feelings for the Furbush trip. Regarding the 3MT training for 3<sup>rd</sup> year PhD students, we suggest that feedback be given in private.

#### *First year training*

The E3-run courses "Numeracy, Modelling, and Data Management" (NMDM) and "Frontiers in GeoSciences" (FiG) have received mixed reviews. The most popular sessions in FiG were those that included an interactive element. Because people don't have expertise in the frontiers topics, having an interactive element is good to keep people engaged. The most popular sessions were the first, which was a guided reading and a group-wide discussion; one which included an activity of reading opposing comments on a paper and forming arguments, then having a debate; and the final session, which finished with a discussion on mitigating challenges in polar research. Our ideas for interactive sessions are: 1) debate on a set reading, 2) discussion on a 'controversial' topic, 3) brainstorming session (in groups or as a whole) to tackle challenges in geosciences, 4) asking open-ended questions to the group, 5) anonymous Q&A (people write questions on a card, they're shuffled and are answered by the instructor or discussed in groups).

Some people had problems with NMDM as they didn't feel engaged – either the sessions were not relevant to their research, or people with expertise in the technique didn't feel challenged, or the sessions were too short to learn an entirely new skill. The problem (as we discussed) is fitting the sessions to people at different levels of experience. Our ideas for possible improvements are: 1) Set multiple exercises depending on people's experience (beginner – intermediate – advanced exercises, like in Susie Johnston's R sessions), 2) If not setting advanced exercises (it's hard to judge where people are at), set a discussion topic for advanced people, so they can work together and help each other with what they're currently working on. We further suggest making the sessions 'opt-in', with a minimum attendance (e.g. three sessions) so that people can choose the practical sessions most relevant to them. There was a request to include statistics training as a part of the course (e.g. an introduction to Bayesian statistics).

#### *Statistics training*

Regarding the statistics training, a solution would be to have the NMDM staff and tutors remind the DTP students that they can get that statistics training by attending Coding Club that is partly supported by the DTP. For example, there was exactly an introduction to Bayesian statistics session on the 21<sup>st</sup> Nov. Though by now students are relatively well-aware of Coding Club and Coding Club was very well-attended this year, another way to improve communication about the training opportunities available would be to explicitly list some of the sessions on the DTP website in the PGR Hub, with the links to the online tutorials for people that cannot attend sessions in full. Gergana is also happy to send an email summarising and linking to the most popular statistics sessions to highlight the places from where students can get help. Following on previous requests from PGR students using Python, Coding Club is extending the resources for Python tutorials, with DTP student James Fulton significantly contributing to the Python expansion.

There was a suggestion to collaborate more with the mathematics department and offer training that can help people learn some of the key math behind statistical analyses. Another suggestion for external involvement included having more input from software developers, and at the sessions that discuss potential career paths, data science and scientific software can be covered, too.

#### *List of training and funding opportunities*

PhD students are generally very keen to have one place where they can find opportunities for training and funding. We suggest that when students have to send in their training reports each year, they also get a link to a OneDrive spreadsheet (or whichever other format works) for the training/funding opportunities they know of or have done, together with a column that allows to give brief feedback (i.e., whether we would recommend to other students). Those tasks are quite similar and people might be more likely to do them if they are presented together.

#### **Cohort Building**

The socials were very well-received. They were a good opportunity to stay in touch with people after the DTP training session frequency goes down, thus you see people less often. To improve, we suggest inviting supervisors along, and perhaps splitting the event in two if booking a room for that many people is not possible, or moving the event to a large enough room.

#### **Professional Preparation**

The extension of the Overseas Research Visit Fund's remit to include international conferences was viewed positively, also reflected by the increase in applications in the December round. A continuing major concern with the Professional Internship Placements (PIPs) is that even though the funding gets extended there is no extension of the final hand-in deadline. Some students said they are not taking up the PIP opportunities exactly because they feel like they

cannot afford to lose that much time from their PhD. We again recommend an automatic extension of the final deadline matching the duration of the PIP. We were happy to see that the E3 is taking on board the idea to create alumni profiles on the E3 website to make post-PhD career trajectories visible and enhance the cross-cohort network, and we are looking forward to seeing that come to life.

### **Website**

We see positive development with regards to information being available to DTP students in one centralised location. However, finding information is still not particularly intuitive, e.g. the link we were sent with the DTP webpage

(<https://www.edweb.ed.ac.uk/geosciences/intranet/student-support/postgraduate-research-support/e3-dtp-students>) doesn't exist anymore, and now the information is part of the PGR Hub on Learn. We suggest adding a sentence on the official E3 website under the training tab to say that for more information, current students should go to the PGR Hub on Learn.

We want to specifically highlight the unprofessional look of the current E3 website that people, including potential employers and collaborators, see when they google our names or the DTP. While we recognise that updating websites poses difficulties, at present the website reflects poorly on us, and we are looking forward to seeing it improved (having photos that show up (or just no images for people that don't want to have their photo up, correct project titles and supervisor names, contact details, website links if students have them, etc.).

We also suggest sending a reminder email to students about the E3/E4 DTP twitter account – if they add the twitter handle, we can retweet whenever students are presenting, have published papers, etc. Finally, we suggest creating a “list of expertise” that includes the area of expertise of both staff and PhD students, so that when PhD students need help on something, they can find that list on the PGR Hub and contact the relevant person. This will also improve general knowledge of what the different people in GeoSciences/Biology are doing.