Using DMPonline with Postgraduate Research Students

Introduction

Postgraduate research students (PGRs) are the researchers of tomorrow. After completing their training, they apply their skills across many walks of life, and some of them become the next generation of academic researchers. If they develop good data management habits early on, they will be able to take those habits into their professional lives, whether as academic researchers, in industry or in other walks of life. One such habit is writing a good Data Management Plan (DMP).

This document briefly evaluates the DMPonline service for data management planning as a tool for training PGRs, and provides some recommendations for those intending to use DMPonline in this way, and to those developing the tool further. It is based on the experience of the Research360 project working with research students in the Doctoral Training Centre in Sustainable Chemical Technologies at the University of Bath.

Requirements

Postgraduate research students (PGRs), like all researchers, are busy and have many demands on their time pulling in many different directions. Any introduction to data management planning must be well targeted to the needs and concerns of these students to ensure that they see it as relevant and not as a waste of time. If they are left with a poor impression of data management early in their career, they will be reluctant to engage with it later as it grows in importance both for them personally and in the wider academic community.

A DMP template for PGRs must therefore:

- Be concise and easy to understand;
- Be relevant to issues facing these students;
- Be useful as a teaching aid as well as a standalone document.

As an example, the Research360 project has produced a DMP template for use with PGRs[1] and accompanying guidance[2].

Evaluation

The DMPonline tool[3] was tested by a group of second- and third-year doctoral students in the Doctoral Training Centre (DTC) in Sustainable Chemical Technologies at the University of Bath, and compared with three other DMP templates aimed specifically at postgraduate researchers:

- Research360 DMP template for PGRs[1, 2];
- Twenty questions about your research[4];
- DataTrain Postgraduate Data Management Plan Template[5].

The students were immediately put off by the amount of detail they were asked to input. Since, at the time, there was no postgraduate-specific template available, the students chose to use the “Generic” template, which actually includes the full DCC checklist,
a total of 118 separate headings. None of the students using this template got anywhere near to finishing it in the space of a two-hour workshop.

The students reported that very little of what they were being asked felt relevant to them. This is understandable, since the DCC checklist was developed specifically to assist academics when applying for research funding, and to cover a lot of strategic areas which really aren’t relevant to an individual PhD project. Such projects are typically already funded, so a DMP is not required to contribute to the justification of such funding. In addition, these projects involve only one worker, the student themselves. While a PhD project will often be part of a wider programme of work under the responsibility of the same supervisor, the student in question would not usually have much input into how collaboration around the project is managed.

The students also found it difficult to understand what they were being asked for in some of the questions. For some questions this was due to the lack of relevance to the student. In many cases, though, the wording of the question was phrased in terms familiar to those in the field of data curation and information management (such as metadata) but not well known to the average researcher.

Recommendations

For those working with PGRs

Data management planning is a useful tool to support RDM training for postgraduate researchers, and DMPonline is one of a number of tools intended to make it easier to produce a data management plan.

Those wishing to use DMPonline as a tool to support PGRs in developing data management planning skills may find these suggestions useful:

- Consider how you will use the template as part of an effective training programme.
  - You may wish to set completing a DMP as a group or individual task in a workshop. In this case, be sure to provide sufficient guidance that the students do not get frustrated with the wording of the questions. In our case, we achieved this by having two teachers circulating in the room, answering direct questions and keeping an eye out for students needing help.
  - Alternatively, you could interactively work through the process of completing a DMP with a whole class. The unfamiliar language used in DMPonline can then be used as teaching and discussion points, helping students to become familiar with it and boosting their confidence.

- Consider carefully which elements of the DCC checklist are relevant to your students, and work with the DCC to develop a DMPonline template which includes only those elements. This will reduce the feeling of information overload that students feel when faced with the full checklist, and reduce the amount of time required to complete it to a manageable level.

- Having chosen which elements to include, develop guidance which explains what is required for each element in terms familiar to your students. Such guidance can be provided as a separate document, but DMPonline also has the facility for directly embedding it in your template so that it appears next to the question to which it refers.

For DMPonline developers

To make DMPonline more applicable to PGR students, the following work could be undertaken:

- Adapt DMPonline so that alternative wording can be supplied for questions, or so that custom questions can be supplied which are not chosen from the DCC checklist. This will reduce the barrier to entry for those who are not familiar with some of the wording in the checklist.
  - At the time of writing, the DCC has already made significant progress in responding to this and similar feedback.

- Engage with PGR students and those supporting them to develop a standard PGR template for data management planning, which can then be used as-is or adapted by institutions as required.

References


[3] Digital Curation Centre. DMPonline. URL: https://dmponline.dcc.ac.uk/.
