The POSTnote Assignment: Preparing a scientific report to Government as an authentic alternative to essay writing

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Keywords: Authentic assessment, Public engagement, Science communication, Transferable skills

Abstract: An activity is described, in which undergraduate students are required to write a ‘report for Government’ in the style of the popular POSTnote briefing documents prepared for members of the UK Parliament, and made accessible on the website of the Parliamentary Office of Science and Technology. This authentic assessment task provides students with the opportunity to research a current topic with political implications, and to develop their abilities to write for a lay audience.

Introduction
An ability to explain scientific information in a way that is accessible for the general reader is increasingly recognised as an important skill, with grant applications often requiring a ‘lay summary’ to describe the proposed work.

In the UK, the Parliamentary Office of Science and Technology (POST) is a service providing “independent, balanced and accessible analysis of public policy issues related to science and technology” to both the House of Commons and the House of Lords (POST, 2020a). A significant part of their work involves the production of briefing documents. These come in two formats, the original POSTnotes, which are a standard four pages in length, and longer documents called POSTbriefs.

To date there have been over 620 POSTnotes published (POST, 2020b) each looking at an important scientific development which has implications in a political context (e.g. relating to resource allocation and/or public health matters). The papers are academically robust, drawing information from peer-reviewed scientific literature and other authoritative reports. Many of the POSTnotes are authored or co-authored by PhD students who are funded by the research councils to complete a three-month internship with POST as a valuable way of marrying together their growing scientific expertise with knowledge of the workings of government.

The clear and consistent structure, the relatively short length of a POSTnote, and the real-world relevance of the issues considered all contribute to this format being an attractive “authentic assessment” (Swaffield, 2011; Ashford-Rowe, Herrington and Brown, 2014).
The assignment

**Context:** Students in a second year Medical Biochemistry module had been asked to write a ‘report to Government’ for more than a decade. However, the layout for the existing task was poorly defined. This new assignment offers greater clarity on the intended structure, as well as demonstrating relevance, since this is a *bona fide* format in which briefing documents are prepared for members of the UK parliament.

**Outline of task:** For this assignment, students were required to write a 2000-2500 word scientific report in a defined structure, based heavily upon the style of a POSTnote (with some nuances, detailed below). Each year a specific theme was identified; for our task this has been either Phage Therapy or Therapeutic Antibodies, in alternate years. The students were provided with a one-paragraph synopsis on the relevance of the topic, and an accessible review and/or website to enable them to get started.

**Exemplar material:** An important principle when asking students to undertake an authentic assessment, with which they will have had limited prior experience, is to provide examples of the type of material they are expected to prepare. One advantage of adopting the POSTnote format is the availability of the large back catalogue of existing briefings. To avoid overchoice, we directed them to look at two or three on topics related to the theme of their assignment; specifically #462 *Surveillance of Infectious Diseases*, #497 *Regulation of Synthetic Biology*, and #504 *The 100,000 Genomes Project*. Additionally, they were provided with a copy of a good report written by a member of a previous cohort (anonymised, and with the authors consent). In regard to the required style, this was the most valuable resource of all, since it not only demonstrated that students in their context can write materials of this kind, it also incorporated the local variations to the official format that we had introduced.

**Specific details regarding structure of reports:** Instruction to the students informed them that they SHOULD follow the formal POSTnote style in:

- Tone and pitch: addressing their paper to a similar audience (parliamentarians who are unlikely to have a science qualification studied beyond age 16, and thereafter members of the general public)
- Sources: drawing information from authoritative sources such as peer-reviewed articles and/or official reports, not general websites
- Layout: they should retain sections called ‘Overview’ and ‘Background’ which are more layman-friendly than ‘Abstract’ and ‘Introduction’. They were also encouraged to make use of pull-out boxes. However they were told to list their sources under the heading ‘References’ not ‘Endnotes’. This latter point was pragmatic – the word ‘References’ cues plagiarism detection software to know that what follows is a list of source materials, and offers the potential to exclude these when calculating the ‘Similarity’ score attributed to the work.

In addition to labelling their sources as ‘References’, the students were told that the following **Differences** from a POSTnote were appropriate:

- In keeping with institutional policy, references should be provided in Harvard format, not as a numbered list
- They should not follow the visual layout of the pages (i.e. with two columns), this was a task about comprehension and writing ability, not graphical design skills
- They should expect to use a larger number of images and/or tables than a formal POSTnote (and these needed to be appropriately credited if not their own work)
- They should not include either the UK Parliament portcullis emblem, or a University logo on their report.

It was emphasised that this exercise was neither asking them to write an essay in a style they might previously have done, nor was it a scientific report in the sense of a lab write-up; there was no expectation that ‘Materials and Methods’ or ‘Results’ sections would be included. Finally, general advice on research and writing, e.g. never cut and pasting chunks of text from a source into their work, lest they commit inadvertent plagiarism.

**Practical tips and advice for running a similar assignment**

I am aware of at least three UK Higher Education Universities that have now adopted this POSTnote format for some of their bioscience students. For others considering doing so, I reiterate the following points:

**Offer examples of the anticipated outputs**: It is always good practice to offer students clear examples of the expected format and quality of any assignment. As noted above, this is all the more pertinent for authentic assessment tasks where students will have no prior knowledge of the genre. Giving students sight of good example(s) from a previous cohort, anonymised and with the consent of the original author(s) is ideal.

Self-evidently this will not be possible the first year that a new task is set. Under those circumstances, one solution (which I have followed in regard to a different assignment, Willmott, 2013) is for the academic lead to prepare a version of the required output. In the case of POSTnotes, however, there is such a plentiful supply of existing briefings that self-writing ought not to be necessary (though, as stated above, you may need to draw particular attention to specific examples and/or any ways in which you want the students to deviate from the formal layout).

**Provide a starter reference**: In addition to being a taxing writing task, successful completion of this activity will require development of good literature-searching skills. Nevertheless, providing the students with an initial background article can serve to give them a foot-hold from which they can see not only the types of sources you anticipate that they will use, but also a starting point from which they can fan out to find other materials. An accessible review is ideal, and there is something to be said for intentionally choosing an article that is slightly out of date so as to leave the students the option of uncovering more recent examples.

**Conclusion**

This is a valuable, authentic assessment task which serves to develop a number of core competences for students, including literature review, comprehension and scientific writing for a lay audience. It is important to note, however, that evaluating reports of this kind and offering feedback will represent a significant time burden for the marker(s). It is probably unsustainable to run an assignment of this kind with more than 50 students unless you have a team of assessors and offer them clear direction to promote consistency in their grading.
References


POST (2020a) Parliamentary Office of Science and Technology. [https://www.parliament.uk/mps-lords-and-offices/offices/bicameral/post1](https://www.parliament.uk/mps-lords-and-offices/offices/bicameral/post1)

POST (2020b) POSTnote. [https://post.parliament.uk/briefing-type/postnote](https://post.parliament.uk/briefing-type/postnote)


Chris Willmott, August 2020