SOURCING INFORMATION FOR ASSIGNMENTS

The third instalment of an occasional column by Biomedical Science Programme Leader **Dr Lynne Lawrance**, for training officers and others supporting students undertaking degrees.

The first step in creating a good assignment is to select good sources: as the saying goes "garbage in: garbage out". Your students will have been given guidance on this, but how well they have engaged with it is variable; any support you can give to help them make good choices will be valuable. The appropriateness of a source depends on the stage of their studies – what is appropriate for a first-year undergraduate is often of too low a level for a Masters student, though to complicate things it depends on the role the source is playing.

Taking information in a textbook as an example, this would be appropriate for most first-year assessments, where acquisition of core knowledge is the priority. By their third year, students should be using journal articles more (the second year is a transition phase), and by Masters, sourcing should be primarily from journal articles. However, use of textbook material could be appropriate for "deep background" in an introductory paragraph, though a review article from a peer-reviewed journal would be a better choice.

Using material from the internet needs to be carefully considered, but there are times when it is the most appropriate source. There are well-curated reliable sources, e.g. the WHO website, and epidemiological data will always be more up to date on the internet then in papers due to the publication process. Of course, most journals these days are housed online but are recognised as journals

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when it comes to academic work. Online encyclopaedias can be a good starting point, but where they are user edited they can have factual errors. They should rarely be referenced but sourcing of the primary papers that the encyclopaedia cites should be encouraged.

Please, help your students understand source bias. Bias is not something to avoid, especially in the later years of study, it is something that students need to tackle. Some bias is really clear, e.g. opinion pieces and commentaries. Other biases are subtle, and even highly regarded sources such as the WHO have a bias – a pro-health one. Even lab documents such as SOPs will have bias or a rationale for a choice made (e.g. using CLED over MacConkey or vice versa, revealing my bias towards microbiology).

Always encourage your students to read widely for their essays. Over-reliance on a single source raises the risk of an assessment offence, and of over-simplifying a topic. There is also the risk of picking a source that is "wrong" or represents a minority view as "the" only view. At higher-level academic assignments you should expect students to show integration of multiple sources to form their own evidence-based view of a subject.

However, reading widely needs to be balanced against information overload. The volume of material available to students via internet search engines or journal searches is massive, especially if your memory goes back to hardcopy Index Medicus or library microfiches! Your student will need help in developing the skills to separate the wheat from the chaff. BMS