

## **DAT 520 Module Ten Overview**

### **Effective Peer Review**

This module is a practicum on effective peer review. Rather than following a formalized structure, there are certain rules of thumb to follow to conduct an effective peer review. Here are a few principles of effective peer review for the purposes of our decision analysis class. There are also a few articles and websites to read on this topic.

The main element to remember is to critique the content, not the person. Critiquing the person can take a subtle form: "Why did you...?" If you need to address the person directly, what you can say instead is: "I noticed that you..." More effectively, do not address the person directly. Address the content of the report directly: "The table includes numerators, but I do not see any denominators. So what this means is..."

Another way that a review can fall down is if it is too positive and superficial. This may mean that the reviewer did not spend a sincere amount of time and brainpower to take apart the content of the report and provide something useful back to the writer. This is a scientific pursuit, and so we can talk about positives and negatives in a detached manner, weighing relative merits, in striving toward better understanding of the course materials. This reflective activity is essential to cementing decision analysis into your mind. The point is to be able to read any decision analysis publication anywhere and understand what it is getting at. If the reviewer took time only to praise or to point out deficiencies, then no service was rendered. Service is rendered most effectively by voicing the struggle to understand the material better and to improve it. The reviewer has knowledge and experiences that the writer does not have, and so to lend an insight can be a great favor to the writer. How do we do that effectively?

No doubt, critique is hard to do well. It is hard to say possibly negative things in a way that would be well received. Beyond that, it is often hard to even understand someone else's research even if it is the best research you have ever seen. So, it goes both ways: if critique is too negative or too positive, that denotes that the reviewer did not actually take the time to consider the work itself and really dive into the meaning of what was written. The most useful peer reviews will contain some mixture of positive, negative, and neutral statements about the work. And even beyond the positive, negative, and neutral, a great critique will not

need any emotional content whatsoever and will just explain the reviewer's position and how the work meets or does not meet that expectation.

To render good critique, you should follow the guidelines. In our case, that is the rubric for the assignment. All scientific and medical journals have instructions for reviewers on what they need to cover, as well as forms they must fill out. This is the same as having an assignment rubric. For our class, use the final project rubric to see the list of topics you need to cover in your review. How did the report meet that line item? Did the report do it in an exemplary, proficient, limited, or non-existent way? Then you will expand upon how the report met or did not meet each criteria and what could be done to improve that line item to being exemplary. There is nothing wrong with going down the rubric like a list.

You should always receive a peer review with a grain of salt. Just because you are getting critiqued does not mean it is time to pick up the spear, but it also does not mean that you need to leave your skepticism at the door. Keep your healthy skepticism at all times. For our class, you should be receiving critique from more than one source, much as it is when you submit an article to a journal for review. You will get peer reviews from at least two independent reviewers. They should be independent because if they give you the same review, then that is not very useful. What you normally do is take those opinions and pool them together to figure out which aspects you want to take into consideration and make changes to your work. Sometimes reviewers provide critique that they think is useful, but may not be that useful. Sometimes you may get reviews back after you have submitted your work, and may have already preemptively addressed some of those reviewer remarks.

Keep in mind that this is real life, that reviewers are not always perfect, and that you may feel insulted by the feedback you receive from a reviewer. This can come from a number of sources and is often a simple miscommunication. People use words in different ways. There are differences in how non-native English speakers and native English speakers use words and phrases. Keep in mind who your reviewer is and who wrote the paper you are reviewing. There are differences in English usage between different dialects of English and even between people in the same family. All of this is at play when giving and receiving critique.

If you feel the hairs starting to rise on the back of your neck, the best thing to do is to keep reading and, inside your mind, to take a step back and actively decide not to react in that moment. Just read the words. Then, when you get to the end, set that critique aside for a while. Take out of piece of paper and write down what you think the main points the reviewer was trying to make about your work. Write this down without looking at the critique. Then take a while—a minute, an hour, a day, or however long it takes for you to regain your internal mental balance and detachment. Then you should reread that critique with your notes right next to it to see if what you wrote in your notes is actually in the critique that the

person gave you. Try to see through the emotional content and to the specific changes that the reviewer thinks need to be made. If after all of this you still feel that the critique is not useful, your saving grace will be the fact that you are getting a review from more than one person and you can concentrate more on that other review. There is nothing wrong with that. Always retain your powers of discernment and skepticism.

The last note is how to respond to peer review. Sometimes—for example, in an editorial situation—the author will field questions or respond to reviews in an open forum. Editors will usually keep these responses short or edit them to be exceedingly to the point. If you are ever in an editorial response situation, the most effective responses are factually based. If the reviewer took issue with one of your methods or choices, then defend that choice in as few words as you can to make your point, such as "Other costs were considered in the model, but there were no relevant data sets available to include them." It is OK to disagree openly, as long as that advances the research. Whatever response you give, the overarching goal should be to advance the work in a general sense, which is the goal of both effective critique and effective receipt of critique: to advance the science.