Guidelines for course project peer reviews

For your course projects we conduct peer feedback, which we will carry out in a similar way as peer review is carried out in normal scientific journal publications. I will serve as the "Subject Editor" of a journal, who assigns reviewers, collects the feedback from reviewers, and then passes the reviews on with additional notes, but keeping the reviewers themselves anonymous.

For your course-projects, we make some deviations from the normal peer review process, which will serve our purposes better:

(1) I like you to work in groups. Providing peer review is sometimes difficult. You may ask yourself: "Am I just not understanding something right?" It's helpful then to see if someone else who reviews has the same problem. If yes, then you can more confidently point to a mistake or lack of clarity. I will assign you to a group if you are not already working in a group. That said, if something does not work out with your group, then just inform me that you will work alone (and which review(s) you take on by yourself.

(2) Your feedback has no bearing on project grades. I want you to provide simple, straight forward, and honest feedback with no considerations how that may influence project grades of the recipients of peer-feedback. Your feedback has no bearing on project grades, only you are evaluated for the quality of your feedback. To further encourage completely arms-length and neutral feedback we'll keep the feedback anonymous, just like in normal scientific peer review.

(3) Negative comments are not allowed. Scientific peer review is full of negativity. Critical and dismissive comments constitute 90% of peer review, 9% are neutral, 1% are positive. You need to develop a thick skin if you wish to publish in scientific journals. Here, we will do things differently. You start by pointing out what you liked, then make constructive suggestions for improvements. No negative comments, such as "*I did not like how the authors explained …*" or "*There is a logical flaw …*" are allowed. Phrase it constructively instead: "*I did not understand how … Did you mean …? Should this not have been …?*"

(4) The peer-review itself is graded. As noted in the syllabus, the peer review that you provide to your fellow students itself will be graded (worth 15%). I will use a single joint grade for reviews done by a peer-review group (unless you let me know that there were substantial imbalances in the contributions). Hand in your peer reviews by emailing them to me. I will forward them to the authors with some additional editorial comments. For a good grade on your peer review assignment, I would like to see comments that are useful for the recipients.

What useful feedback constitutes obviously depends highly on the shape of the project. If everything looks great, say so and provide some minor editorial service, pointing out typos, or suggest minor improvement to figures and tables. If things are incomplete or in rough shape, then focus in the big picture: Perhaps think about what figures would be useful, how the objectives can be better addressed, how the experimental design could be improved.

I highly value and highly grade creative feedback for improvements. As such, the last section "*(5) Suggestions for improving the website*" will factor heavily in your peer review mark. Secondly, I also highly value and highly grade if you do not overlook a major problems in logic, research approach or conclusions, which you should describe in the *(1) synopsis* section.

How to get started

(1) Wait for an email to each group where I assign the project reviews. You will get twice as many review assignments as you have group members in your peer review group. As such, each of you can lead two reviews, and then circulate it to others for editing and additions.

(2) Start by watching the 5-minute presentation, and speed-read through the entire website. While you do both, make some notes on the structure of the website and presentation. Was there something that was initially unclear, but then later got clarified? Did you get lost at some point? You can only identify those weaknesses on your first read. Ideally, everything should be presented in a logical sequence and you should not get lost at any point because you are not given a critical piece of information that is only explained later. Both the website and presentation should be able to stand on their own, i.e. it should not be necessary to have viewed the presentation to understand the website and vice versa.

(3) Meet up with your peer-review buddies and compare your first impressions. Brainstorm a brief outline of the key comments on what was good and what could be improved.

(4) Then, each of you can draft two reviews and circulate it to your peer-review group members for improvements and additions.

Structure of the peer review

Use the 5 subsections below to structure your comments:

(1) The no-bullshit synopsis [equivalent to comments to the editor]

In your own words, describe what the project is all about. This would be similar to an abstract, but devoid of any spin, wishful thinking, and unsupported claims. Do <u>not</u> rewrite the abstract of the authors. Instead, the synopsis must be <u>your</u> unique perspective of what <u>you</u> think the results mean, and <u>your</u> perspective of what is the (potential) value of the research.

If something is unclear, you should point out that you are not sure. In that case, use phrases like: "*I think the authors are trying to find out what ...*" or "*I don't understand the experimental design, but possibly the authors did the following: ….*"

Your synopsis should convey your best understanding of the: (1) The reason for the study, (2) the author's objectives, (3) the research approach they used, (4) the key results, and (5) the conclusions that can be drawn (or should have drawn).

Your synopsis should normally be very brief (maybe about 150 words). In formal peer review this would be your overall evaluation for the editor. However, here we don't need to make a value judgment on the scientific contribution per se. You can also expand the synopsis by adding a section on high-level tips to the authors how to improve the framing and interpretation of results.

This synopsis serves two important purposes: if you don't understand the points that the authors want to make, this is where they can see right away that they have miss-communicated something. Secondly, if an objective is not addressed, an analysis is flawed or a conclusion not

supported, then it must be red-flagged in the synopsis. In this section, you need to strike a balance between avoiding negativity while still clearly communicating issues. Replace negativity by asking the right questions and making constructive suggestions.

If there are major problems that you overlooked, it will compromise your peer-review mark. *This section (1) and section (5) will be the most influential on your peer review mark.*

(2) What you liked about the presentation

Start with some high level comments of what you liked (style of slides, pace of narrative, voice, a specific slide, slide show structure, hook, ending, etc.) What do you think were the best parts? Make this short. I want to see your ability to recognize what really was the best part.

(3) Suggestions for improving the presentation

From general to specific, give some tips for how you think the presentation could be improved, starting with overall structure, proportion of time dedicated to each section (opening, rationale, methods, results, discussion, conclusion, ending). Then, add specific suggestions, like improving a graph or improving a specific explanation. A bulleted or numbered list is a good format for this section. Still, keep this section short and focus most of your work on sections (1) and (5).

(4) What you liked about the website [equivalent to general comments]

What do you think were the best parts of this research project? Make this short. Again, I want to see your ability to recognize what really was good!

In a real peer-review, you rarely receive positive comments, but I encourage you to break this convention. If you recognize something has been well done by the authors, say it!

(5) Suggestions for improving the website [equivalent to specific comments]

Don't run out of steam for this last section. Creative and specific suggestions will constitute much of your peer review mark.

Perhaps for each page of the project website (typically Intro, Data, Methods, Results, Discussion conclusions), make some suggestions of what could be improved. A *bulleted or numbered list* is a good format for this section.

For this part, *do not use the project guidelines* for reference. Leave this to the instructor. Instead, *provide an audience perspective!* What would you like to see, that would help you better understand the methods, data and conclusions drawn from the analysis.

Can you think of figures, maps, diagrams that could better support the explanations and conclusions? In what sections is the narrative too long or too short to keep you interested and engaged?

If you see major flaws, for example that the conclusions don't follow logically from the data, you can say something like: "*I think in order to draw the conclusion that … you need to show … in a figure or table*".

If everything looks great, just focus on minor suggestions: typos, layout improvements, sharpening an argument, providing a clearer recommendation for a stakeholder, etc.

Length of peer reviews

The appropriate length of the review depends on the state of the project or complexity of the research presented, but peer-reviews typically sit somewhere between *500 and 1500 words* to give you a rough guidance. However, just like for scientific journal peer-review, I do not prescribe a specific minimum or maximum length. Use whatever space you need to convey useful comments. You can add photos of a sketch for a table, figure, diagram, or map to the document that you think might be useful.

Submit your peer review

Submit your peer reviews via email to ahamann@ualberta.ca by the deadline posted on eClass. Submit a single Word or RTF document for each peer review. I will send you templates that you can use, where you can replace the instructions with your peer review, looking like this:

Peer review group: 06
Review for project: 2021-14 Kira Dlusskaya - Which greenhouse gas reduction practices are farmers willing to adopt?

(1) General synopsis

Your review …

To make my life a little easier, leave the title unchanged (above). Also, leave the file name of the review templates that I sent you (below) unchanged. Lastly, do not send me PDF files. It should be the original Word or RTF format templates, from which I can strip any user identification meta data.

Project 21-14 Group 06.docx