# Discussion Prompts:

## Post-Proposal A discussion prompt

Ask students to pair with someone who has not heard them talk about their proposal outside of class. Read each other’s treatments and procedures, then provide feedback about clarity, missing steps, etc. [If time allows, repeat with a second pairing.]

After completing pair discussions, go around the room to have people share different things that were pointed out to them as being unclear or incomplete or that they pointed out to their classmates. Ask for new/different points than shared by previous contributors.

## Introduction of Mock IRB for research proposal

You have been randomly assigned to groups of ~4 classmates to conduct pre-IRB review of your proposals.

You will give each person in your group a copy of your IRB proposal, and then pick one proposal to review first. The students other than the proposer will provide feedback as if they were the IRB. Read the proposal (quickly but carefully), then take turns providing feedback.

The goal is to be tougher on proposals at this stage than we expect from the formal IRB, so that there are no hiccups with formal approval. Moreover, this review will go beyond the IRB requirements about human subjects to consider the full array of ethics principles we have discussed and provide feedback about practical aspects of the research design.

Be sure to deliver your feedback constructively. Our purpose is to help improve each other’s research. At this stage, there are no mistakes or problems, just plenty of opportunities for improvement.

As a reminder, some of the key principles for human subject research, other ethical principles, and practical research design are on the board.

Human subjects research *(for board)*

* Treating participants with respect for persons
* Informed consent
* Appropriateness of participants for research question (recruiting and selection)
* Minimal risk and minimization of risk
* Risk vs. benefits for participants
* Risk vs. benefits for public
* Protection of privacy (when conducting experiment and data)

Other ethics principles *(for board)*

* impacts on society from possible outcomes of experimental treatments
* impacts on society from applying the lessons learned from experiments
* impact on future research prospects

Research design *(for board)*

* clear and falsifiable hypotheses
* internal validity of treatments
* is the ‘recipe’ clear enough for anyone to ‘cook’ the experiment

## Introduction of Mock IRB for pre-analysis plan

Today’s class is similar to the pre-IRB review from a couple of classes ago, but we are focusing on the pre-analysis plans. As before, you will be in randomly assigned groups of ~4 students. Exchange copies of your pre-analysis plans

The ethics aspect of today’s review of pre-analysis plans is largely about ensuring the plan has sufficient detail and clarity that another person can follow the entire analysis process.

The practical aspect of today’s review of pre-analysis plans is making sure each of you has thought carefully about each step needed to complete your analysis for your final project.

Conveniently, these two aspects are essentially the same thing ☺

The ‘gold-standard’ is whether you could complete someone else’s analysis based on the document, without asking them any questions. If steps are not clear or steps are missing, ask about them now so your classmate can think them through before it is time to do the actual analysis.

Try not to get bogged down in discussing how to clarify steps or fill in missing steps. Focus on identifying these areas for each other. If you spending too long on how to clarify or fill in, you will not get through all of the proposals.

## Introduction of review of analysis code

Next, we are going to workshop the code you have written to implement your pre-analysis plan. After revising based on this workshopping, you should be able to load the raw collected data and run the code to produce your analysis.

Pressing the keys to run this code is among the most thrilling and terrifying moments in conducting an experiment. In a few second – or a few minutes – you find out whether your hypotheses are supported. Unless you hit code errors that are anti-climactic, frustrating, and often create great temptations to nudge the analysis towards finding what you expected. The goal today is to get the thrill (and terror) without the disappointment, frustration, or temptation.

The task asked you to note where you ran into trouble coding a step using your test data. We will go around the room, and I will list all of these problems on the board. Then we will see if others have proposed solutions for each roadblock, which we will share either to the whole class or in small groups depending on how many issues there are and how widespread the roadblock is.

Remember that there are often multiple valid ways to code data management steps, so there isn’t a right or wrong answer. The statistical analysis is more likely to have wrong ways, but may have more than one ‘right’ way.