Homework #5: Tuning Lab 2 Report

Tan Dao, Landon Buell

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Abstract

Tune the abstract and methods sections of your Lab 2 draft to make your writing more effective. Complete this worksheet with your lab partner by responding to each of the prompts in reference to your Lab 2 draft. Your attention should be on how to improve your writing. Submit both versions of your draft (both before and after completing this worksheet) along with this worksheet.

1 Be Precise

a. Look at all the words you use in your abstract and decide if they are the best word choice. Do they have the correct meaning? Is there a more precise choice? List words your changed or considered changing and why.

1. *Celestial* - Good wording, but we may want to be a bit more specific. Shoud be introduce a little bit more contect and detail before using this word?

2. *Moon Cycle* - replace with Lunar Cycle? part of lunar cycle? Spceficiy the start and end dates?

3. *Eccentricity* - Important keyword, but we shouldn't over use it. We could provide a little but of contect through geometry to help prevent over use of the one word.

b. Examine the level of detail in your abstract and introduction considering your expected audience. Did you choose the right level of details for your audience at this point in the paper? Do the details inform? List any changes you made or plan to make.

1. Although it was for a draft, the abstract is lacking detail. We fail to properly introduce the problem and provide any context/

2. We explain a few ideas about eccentricity, and observation, but more detail and analysis of methods should be included.

3. The language and reading level feel appropriate. Sentence are readable, clean and concise. I have adapted much of the information in the introduction from the two sources.

4. I do feel that some of the background detail is incomplete. I do plan to include several figures, and reference to the figures to better outline the geometry of the system.

2 Be Clear

a. Throughout your draft, look for complex words/phrases and replace them. List changes here.

1. We do not use many exceedingly complex words or phrases at the moment.

2. *...being inversely proportional to the square of the distance between them...* - Could be cleaned up a bit. This sentence feels clumsy.

b. Look for complex sentences. Break up and remove unnecessary details if possible. Ask: "Does it inform?" Check that you have one main idea per sentence. List changes here.

1. We do not

c. Look for ambiguous writing and replace it. Consider word choise ("as" = "like"? or "because"?), syntax (bell jar example from Writing Workshops), pronouns (the meaning of "it" and "this" should be exact. "This" what?), and punctuation. List changes here.

1. *This* can be changed to *this equation.*

2. put a comma before *respectively*

3 Be Forthright

a. Look for pretentious or arrogant words/phrases and replace. List changes here.

1. *I am VERY guilty of this*

2. *he sought to develop a theory that could quantify the orbital mechanics of the planets* - Perhaps this could be simplified, and even shortened?

3. *He derived an analytical solution to the equation of a bounded orbit, which models the separation of the two bodies r as a function of angular displacements,* ϕ - THis hsould be broken into two smaller sentences such that it reads cleaner.

b. Look for silly or colloquial language and replace. List changes here.

1. *...observe the moon and attached a camera to the telescope* - Could be written a bit neater. Maybe include more detail on using an adapter, setting consistent focal depths.

c. Choose strong verbs and nouns. Strong nouns provide imagery. Strong verbs contain the natural action of the sentence. Don't bury strong verbs in adjectives. Look for opportunities to use active voice. List changes here.

d. Look carefully at your use of the first person: are there places where it is more natural to use first person? Are there places where it is used but gives you, as the author, too much emphasis?

1. We often use "we" and perhaps this could be replaced with a more generalized, "...it was done..." , or exclude the human actions of doing somethings, and just state what was done?

4 Be Familiar

a. Consider what language you share with your audience. Is there jargon you can remove? List changes here.

1. Excessive detail about limits, ratios and mathematics to do need extreme detail, but nonetheless must be included.

2. We may not need to explain exactly how focal length and focusing works - it may too much detail that the reader already knows.

b. Are there unfamiliar terms that need to be introduced? List changes here.

1. Certain vocabulary *Semi-latus rectum*, *eccentricity*, and so forth may need stronger introductions.

2. Concepts from optics such as the workings on a concave telescope may need to be included.

c. Is there an opportunity to use an example or analogy? List changes here.

1. I do my best to do this whenever possible, and have done so in some cases

2. I will likely try to include some better analogies when time to detail out the experimental methodology.

5 Be Concise

a. Look for redundant words and eliminate them. List changes here.

1. *Telescope*, *eccentricity* are use a lot. These could be replaced with pronouns (not advised) or more specific terms.

b. Look for writing zeros and eliminate them. List changes here.

1. *Johannes Kepler (1571-1630) was a German astronomer, mostly commonly known for is work in quantifying planetary motion* can cut the comma and most commonly.

2. can cut *mutual* in the first sentence of the second paragraph.

c. Look for opportunities to simplify sentences. List changes here.

1. The first sentence of the second paragraph can be simplified as *Kepler modeled the force of attraction between two bodies as the inversely square law.*

2. The third sentence of the first paragraph can be written as *Kepler's model consists of two masses, ...* because we all know no one has the analytical solution to more than two bodies orbit problem so we can cut the *consisting of only two masses* to simplify the sentence.

6 Be Fluid

a. Look at sentence rhythms and see if you can improve the flow. Consider openers, lengths, and structure. (Read it out loud to see if it 'sounds right'). List changes here.

1. can cut *in order to do this* in the third sentence of the first paragraph.

b. Look at your transisions (pauses, continuation, reversal) and see if they can be improved. List changes here.

1. change *respectfully* to *respectively.* Also put a comma before respectively.

2. this paper does not have a lot of transition sentences yet so not a lot of changes to be made.

c. Look at whether you have any unnecessarily complex typography. Consider the utility of equations and incorporate them well. List changes here.

1. Can incorporate equation 4 into the text and explain more of what is it role in determine the eccentricity of the moon's orbit.

2. The constant α is the .... sentence does not flow very well. This can be worded as *The semi-latus rectum is a constant relating the angular momentum, ...* and can cut all of the equations about angular momentum and force because they are not important for this lab.