Meeting 4: Results

- What are some good and poor figures you found in the published literature?
What is the **Content** of the Results Section?

- An overall description of the experiments to orient the reader.

- Overall view of the results to give the reader the scope of the section.

- The data (in past tense).
What is the Content of the Results Section?

• For:
  – FEW determinations - use descriptive text.
  – REPITITIVE determinations - use tables or graphs.

• Report only meaningful data (not all of it).

• Report data in figures or text but not both.

What Differentiates Methods and Results Sections?
What **Differentiates** Methods and Results Sections?

- **Methods** = HOW the data were accumulated.

- **Results** = WHAT data were accumulated.

What **Differentiates** Results and Discussion Sections?
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- **Results** = Data PRESENTATION.
- **Discussion** = Data INTERPRETATION.

What are Some **Qualities** of a Well-Written Results Section?
What are Some Qualities of a Well-Written Results Section?

• Results focus on the paper’s hypotheses.

• Methods and results sections correspond.

• Results are presented in a logical order.

• Opening sentences to each subsection orient the reader to the data that follow.

Example:
Interaction with CSN6, BUG ‘02 page 5 (continued)
What are Some Results Section Pitfalls?

- **Including methods and/or discussion** in the results section.
  - Overlap is acceptable in some circumstances.

- **Opening with weak or uninformative sentences.**

- **Overstating** the results (e.g., figures 1. clearly shows…”)

- **Reporting irrelevant results**
  - Although it is sometimes useful to report experiments that didn’t work.

- **Omitting visual organizers** (e.g., subheads).
Today’s In-Class Exercise

1. Data Collection:
   • Divide into 4 groups and collect data for each person in your group as you conduct the Harvard step test:
     • Take pulse
     • Step up and down on crate 100 times
     • Take pulse immediately after completing step exercise
     • Take pulse at 1 min. after completing step exercise
     • Take pulse a 3 min. after completing step exercise
     • Take pulse a 5 min. after completing step exercise

2. Make Figures:
   • Plot pulse against time for each person in your group.
   • Calculate tau (Time point for 37% of highest pulse rate).
   • Plot tau for your group.
   • Plot tau for the whole class.

3. Write up the results of this study. Refer to the figures you’ve made.

More In-Class Exercises

2. Write results sections for one of the experiments from your current lab module (based on your lab notebook).

3. Write two alternative opening sentences to the results section you just wrote and share them with your writing partner.
Out-of-Class Exercises

• 1. Complete any in-class exercises that you did not finish in class.

• 2. Continue with your long-term project.
  – Write the Results Section
  – Revise prior sections according to my edits and return it with my written comments if you would like further feedback.

• By 1865, the genre of the scientific paper... was well-established... Thus in Mendel's paper it is not surprising to find, in a brief introduction, a statement about:
  – the motivation for the experiments (focus)
  – a summary of previous work (context)
  – and a claim that the previous work is lacking in certain respects (justification).