

Writing About Quantitative Data

Tutorial 6
ENV201

Material adapted from: Perdue Online Writing Lab; Freedman
2012, Writing in the Sciences

These materials were created for educational purposes by the course instructor, Professor Tenley Conway.

General Points

- ▶ Lab reports and primary research articles are ways of communicating details about data, including collection, analysis, results and implications
- ▶ The three-prong challenge of writing about data:
 1. Express concepts in the most precise way possible
 2. Use appropriate terminology
 3. Use the fewest words and the clearest possible structure for sentences and paragraphs

Keep in mind.....

- ▶ Methods, results, and discussion sections each have their own purpose; there should be little overlap in content
- ▶ Use different verb tenses and active and passive voices in different sections.
- ▶ Write clear topic sentences for paragraphs.
- ▶ Place "old" information at the beginnings of sentences.
- ▶ **Use "signal" words as needed.**



Reminder: Active vs Passive Voice

Example 1:

- ▶ Active Voice: The dog bit the boy.
- ▶ Passive Voice: The boy was bitten by the dog.

Example 2:

- ▶ Active Voice: Surgeons successfully performed a new experimental operation
- ▶ Passive Voice: A new experimental operation was performed successfully

Reminder: Past Tense vs Present Tense

Active Voice

Present tense:

- ▶ The company ships the computers to many foreign countries.

Past tense:

- ▶ The company shipped the computers to many foreign countries.

Passive voice

Present tense:

- ▶ Computers are shipped to many foreign countries

Past tense:

- ▶ Computers were shipped to many foreign countries

Methods

- ▶ The general type of study is identified
- ▶ Details about the data, including how it was collected are presented
- ▶ Details about the analysis are described in the order they were conducted.

- Enough detail should be present to allow repetition of the data collection and analysis.
- Past tense is used here (you have already collected and analyzed the data); passive voice is ok.



Results

- ▶ Both major and minor relevant findings are presented; present major findings first
- ▶ Highlights of any data presented in tables and figures should be clearly summarized for the reader in order to show its significance
- This section is of key importance, yet it is often the shortest. That's OK.
- Present tense *and* past tense verbs are used here, as well as active voice wherever possible.

Discussion

- ▶ Discuss what conclusions may be drawn from the patterns in the results?
- ▶ Discuss the degree to which these findings may be generalized. Will they always hold true in other places, for other people? If not, when might they be true/similar?
- To convince the reader that the interpretations of the results are correct
- Result findings may be referred to, but not repeated in detail
- Present tense and an active voice should be used

