

## Writing Research Reports in Psychology

- Overview of Research Reports.
- APA Format.
- Major Sections of the Report.
  
- Submitted vs. Published Articles.
- Aspects of Good Writing.
- The Hourglass Method.



## On the importance of writing

**Words are the most powerful drug used by mankind.**

~ Rudyard Kipling

**Simply by making squiggles on a page, we can reliably cause precise new combinations of ideas to arise the mind of another.**

~ Steven Pinker

**The real technology behind all our other technologies is language. It actually creates the world our consciousness lives in.**

~ Andrei Codrescu

**Good writing is not an obscure talent used only by the most erudite and privileged of our society. Good writing separates you from the pack because all careers require communication.**

~ Lt. Sean Newman

### **On how writing reflects on the writer**

**Every author in some way portrays himself in his works,  
even if it is against his will.**

~Goethe

**Every time you write, the composition of yourself is at stake.**

~E.L. Doctorow

**Many books require no thought from those who read them,  
and for a very simple reason. They made no such demand  
upon those who wrote them.**

~Charles Caleb Colton

**Easy reading is damn hard writing.**

~Nathaniel Hawthorne

### **Overview of Research Reports**

Report-writing, like driving and love-making, is one of those things that almost everyone thinks they can do well without instruction. The results, of course, are usually disappointing. ~ Tom Margerson.

- Research reports in psychology employ a technical writing style designed to be as objective as possible.**
- Characteristics include:**
  - ***being succinct & clear (parsimonious).***
  - ***documenting facts & claims by citing published sources.***
  - ***avoiding personal feelings, opinions, or agendas.***
  - ***avoiding slang.***
  - ***avoiding biased language (sexist, racist, or insulting to specific groups such as older adults, those with physical disabilities, or those diagnosed with mental illness).***

## APA Format

- ❑ In psychology, research reports follow the technical writing style set by the *American Psychological Association* (called *APA format* or *APA style*).
- ❑ This format is described in detail in the *Publication Manual of the American Psychological Association*.
- ❑ Key aspects of formatting include:
  - *One-inch margins, 12 pt. font (Ariel or Times New Roman).*
  - *Double-spacing throughout.*
  - *All paragraphs except Abstract indented .5 inches.*
  - *Specific system of Section headings, subsections, etc.*
  - *Header used to put page number & paper identification information in upper right-hand corner or every page.*

## Major Sections of the Research Report

- ❑ In this Order: Title Page > Abstract > Introduction > Method > Results > Discussion > References > Author Notes > Footnotes > Tables > Figures > Appendices.
- ❑ Title Page.
  - *Title, Authors' Names & Affiliations, Running Head, [Contact Info].*
  - *Title should be ~12 words or less, as descriptive as possible.*
- ❑ Abstract.
  - *A brief (<120 word) self-contained summary of the report.*
  - *Should contain: 1) The problem investigated, 2) The methods used, 3) The major results, & 4) The major conclusions.*
  - *Should be interesting! Good Abstracts attract readers, bad Abstracts repel readers.*

## **Major Sections of the Research Report**

### **□ Introduction.**

- *Starts with the title of the report, centered at the top of page.*
- *The Introduction tells the reader what you are doing and why.*
- *Should include:*
  - (a) *the issue, problem, or question you are investigating.*
  - (b) *prior research done on the issue (along with references).*
  - (c) *your theoretical orientation, including hypothetical constructs & operational definitions.*
  - (d) *your hypotheses and predictions.*
  - (e) *a general statement of your design & methods.*
- *The funnel analogy for writing an intro (cf. hourglass method).*
  - *start wide (general topic) and end narrow (specific issues).*

## **Major Sections of the Research Report**

### **□ Method.**

- *Uses multiple subsections to tell the reader exactly how you did the experiment, such that they could closely reproduce it.*
- **Participants.**
  - *who, how many, how they were obtained, and any relevant demographic or clinical information.*
- **Materials.**
  - *details about equipment (type used, model #, etc.), materials & stimuli (how many, what kind, how they were obtained, etc.).*
- **Procedure.**
  - *describes how the research was carried out; how participants were assigned to conditions; what they did & in what order.*
- *Optional: **Design** & **Analyses** sections.*
  - *e.g., **Participants** & **Design**.*

## Major Sections of the Research Report

### □ Results.

- Tells the reader how the data were analyzed and what was found.
- Often begins with a general summary of the main results, followed by a more detailed account that includes specific statistics and reference to relevant data tables and figures.
- Reporting of statistics minimally includes the name & value of the statistic along with the associated significance level ("p value").
  - $r = .35, p < .05$ .
- If part of the statistic, degrees-of-freedom are also reported.
  - $t(23) = 1.67, p > .10$ .
- More complex stats include a measure of the error variance associated with the stat along with an estimate of the effect size.
  - $F(1, 23) = 8.31, \text{MSe} = .00559, p < .001, \eta^2 = .33$   
(optional)

## Major Sections of the Research Report

### □ Results (cont.)

- The Results section often includes Tables or Figures that summarize key aspects of the data.
- Tables & Figures should only be included if they simplify the presentation of your data or clarify their meaning.
- Regardless of whether the data is presented in the text or in a Table, means should always be accompanied by a measure of variability (e.g., Standard Deviation [SD]).
  - "...more names were recalled by the young adults ( $M = 16.2, SD = 3.7$ ) than the older adults ( $M = 9.4, SD = 4.1$ ), a difference that was significant by t-test [ $t(23) = 6.63, p < .01$ ]."
- Results generally include very little interpretation of what your results mean. This is done in the final major section....

## **Major Sections of the Research Report**

### **□ Discussion.**

- *This is where you interpret your results and evaluate them in light of your hypotheses and prior research.*
- *Often begins with a brief summary of your hypo & what you found; then addresses different facets of your project such as...*
  - (a) *the specific variables manipulated.*
  - (b) *how your results impact existing theories.*
  - (c) *unexplained results.*
  - (d) *alternative interpretations of your results.*
  - (e) *limitations of your study.*
  - (f) *real-world implications.*
  - (g) *directions for future research.*
- *The section often ends with a very brief paragraph that sums up the project in terms of the broad issue which with it began.*

## **Major Sections of the Research Report**

### **□ References.**

- *This is where you provide the sources of the references cited in the report.*
- *Note there are very specific formatting rules for references!*
- *Journal articles:*
  - Green, C. S., & Bavelier, D. (2003). Action video game modifies visual selective attention. *Nature*, 423, 534-537.
- *Books:*
  - Stuss, D. T., & Benson, D. F. (1986). *The frontal lobes*. New York: Raven Press.
- *Book Chapters:*
  - Toth, J. P. (2000). Nonconscious processes in human memory. In E. Tulving & F.I.M. Craik (Eds.) *The Oxford Handbook of Memory* (pp. 245-261). New York: Oxford University Press.

## **Major Sections of the Research Report**

*The following sections are only include if necessary.*

- Author Notes** (aka. Acknowledgements).
  - *Acknowledges funding (granting agency & #), help received with the research or writing of the report, specific contact info, etc.*
- Footnotes.**
  - *Used to clarify or elaborate the text. Use sparingly!!!*
- Tables & Figures.**
  - *Tables come first, then figures, with each on a separate page.*
  - *Titles are provided for each table, at the top of the page.*
  - *Figures are preceded by a "Figure Captions" page that lists all of the figures along with their captions.*
- Appendices.**
  - *List of Stimuli, Survey Questions, Details about Stats, etc.*

## **Submitted vs. Published Articles**

- The formatting of submitted articles is designed to facilitate reviewing; thus, they look very different than published articles.*
- In this course, all work will be in the form of a submitted article.*

## **Aspects of Good Technical Writing**

- *Keep your sentences short & clear.*
- *Use words correctly (e.g., there vs. their; affect vs. effect; etc.).*
- *Avoid slang, biased language, & stream-of-consciousness writing.*
- *Avoid personal feelings & opinions.*
- *Document all cited facts.*
- *Express numbers correctly.*
- *Draw conservative conclusions.*
- *Use the active voice.*
- *Re-read & revise your work before submitting it!*

## On practice & revision in becoming a good writer

**Practice, practice, practice writing. Writing is a craft that requires both talent and acquired skills. You learn by doing, by making mistakes and then seeing where you went wrong.**

~ Jeffrey A. Carver

**I'm not a very good writer, but I'm an excellent rewriter.**

~ James Michener

**The time to begin writing an article is when you have finished it to your satisfaction. It is only then that you begin to clearly and logically perceive what it is you really want to say.**

~ Mark Twain

**Write your first draft with your heart. Re-write with your head.**

~ From the movie *Finding Forrester*

## The Hourglass Method for Writing Reports

