BUILD Workshop

PREPARING UNDERGRAD THESIS

Outline

- Look for Opportunities to Publish
- Requirements of the Honors Thesis
- Writing Tips
- Grammar and Punctuation
- How to Avoid Plagiarism

Opportunities to Publish

While you are involved in mentored research, the key to success in graduate school is finding opportunities to publish your research.

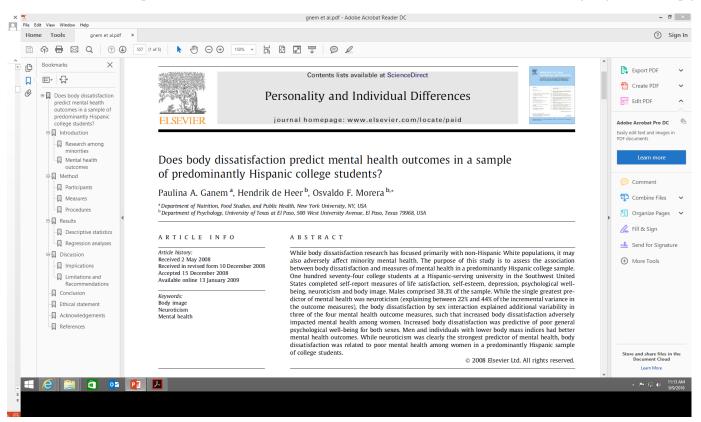
These opportunities extend beyond the research lab.

A story on research that shows that some people need drama in their lives. This research was based on a class project

http://news.utep.edu/utep-research-shows-some-people-need-drama/

Opportunities to Publish

The following was based on a senior honors thesis in psychology



Requirements

The requirements will be more fully discussed next week. They are designed to help you complete your thesis in a timely fashion

In general, we would like to see your introduction and methods sections of the thesis completed by the end of this semester

We will set deadlines for you to get these parts of the paper to your mentor. Your mentor will have 1-2 weeks to give you feedback

You'll incorporate the feedback in the report that you send us

The report will be the two parts of the paper mentioned above

We'll adapt a similar strategy in the spring for the results, discussion, references and appendices/tables/figures.

We're here to help

- 1) Get your reader interested in the topic at the beginning of the paper.
 - Tell the reader why your topic is interesting and important.
 - The goal is to highlight how your topic, study or paper will contribute something important or new.

- 2) ALWAYS assume that your reader knows a lot less than you about what you are doing.
 - This means that you need to explain ideas and terms that seem obvious to you.
 - Be able to explain it to your grandmother.
- 3) Start with general ideas
 - Elaborate on these ideas with more specific details.

- 4) Use computer software to help you write. Spellcheck is your friend.
- 5) Know the limitations of computer spelling and grammar checking software.
 - They can check words (i.e., spelling) and sentence structure (i.e., grammar), but they cannot check meaning.
- 6) Get second opinions.

- 7) DO NOT WRITE IN A SINGLE SITTING. Good writing does not happen in a single shot. Start early and give yourself time to revise and rewrite your paper.
- 8) Revise and re-write.

- All good writers go through many drafts before they finish a paper.
- •Each time you go through a paper, you should try to look at different things.
- Evaluate each paragraph;
- Evaluate the sections;
- Evaluate each and every sentence.

Outlining

- •What is your general topic or what problem area are you interested in? How would you express it in a few words?
- What central question are you trying to answer about your topic?
- •What do you think is the best answer to your central question? From your research so far, what have you concluded? What is your main point about your topic?

Outlining

- •In one sentence, how would you describe your findings to someone who asked you about your research?
- How does your idea differ from other views you have read? What do you have to say about your topic that is new?
- •What relationship exists between the ideas you are describing? For example, are you suggesting that one idea causes another?

Grammar and Punctuation

LET'S EAT GRANDMA. LET'S EAT, GRANDMA.

COMMAS SAVE LIVES!

Common Grammar Mistakes

Accept VS. Except

Accept = to admit, receive, approve

Except = exclusion

Affect VS. Effect

Affect = verb meaning to influence: Will lack of sleep **affect** your game?

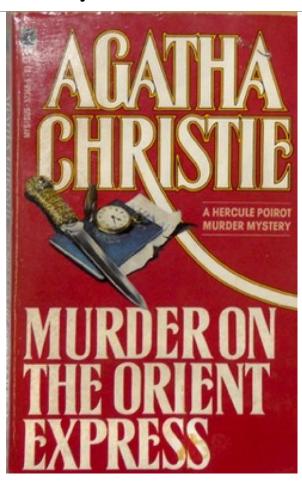
Effect = noun meaning result or consequence: Will lack of sleep have an **effect** on your game?

Effect = verb meaning to bring about, to accomplish: Our efforts have **effected** a major change in university policy.

Common Grammar Mistakes

http://www.yourdictionary.com/index.php/pdf/articles/99.top10gramm arerrors.pdf

Your paper isn't supposed to be a mystery novel



Sections of an empirical article

Sections of an empirical article

- Abstract
- Introduction
- Methods
- Results
- Discussion
- References

HOUR GLASS

Start specific (non-technical) and end broad

Beginning: restate main finding

Then: outline what you will talk about

Draw inferences

What conclusions you can make now that you know your results



Abstract

Motivation: Why do we care about the problem and the results?

Problem statement: What *problem* are you trying to solve? What is the *scope* of your work (a generalized approach, or for a specific situation)?

Approach: How did you go about answering your research question?

Results: What's the answer?

Conclusions:

What are the implications of your answer?

How to Write An Abstract Section

- An abstract should be no more than 200 words and must review <u>briefly</u> the following information:
 - Rational for study/Introduction
 - Hypothesis and IV/DV
 - Methods
 - Results
 - Conclusions/Implications of the study

Abstracts

- •What is so important about the abstract?
- What do you think the main goal is?
- •How would you use an abstract?

Goals of the Abstract

- People know about all aspects of your paper without reading your paper
 - Just not in detail
- Include what is MOST important
 - Your findings will guide your word choices

Introduction

- Think broadly (big picture)
- Then become more specific
- Every paragraph should have a conclusion that is related to how you will introduce your study based on theory

How to convey your message

- Use step by step approach to guide reader into theory and how it relates to the topic you will address with your study
- Use examples
- Avoid jargon

Structure of Introduction

- •First sentences of intro:
 - Discuss the issue at hand or the current state of the topic as it is addressed by the literature
 - What could be the first sentence of your intro?

The first sentence of each paragraph there after

 Open up with general statements, not what research has been conducted

•Example:

- Wrong: Teplin et al. (2001) conducted a study on prevalence of juvenile offenders and found that offenders have higher rates of mental illness compared to the general population.
- Right: In recent years juvenile justice agencies have struggled to determine the proportion of juvenile offenders with mood, anxiety, or psychotic disorders to inform mental health service planning.

Uses familiar terms

Then after your general statement....

- Summarize what we know about the topic
- •End: how it relates to your topic
- •Questions to ask yourself:
 - What has previously been done on the problem (topic)?
 - What are the important theories on your topic?
 - What am I trying to convey by presenting this research?

Things to keep in mind when writing

- An intelligent layperson should be able to understand.
- Define the relationship between variables in enough detail and without jargon to provide reason for why you conducted your study
 - Rationale
- When discussing technical terms—use examples
 - Don't assume they know

Citing

Know what to cite

- Keep track of original sources-programs
- Be careful of "cut and paste" online research
- Beware of "common knowledge"
- When in doubt, you must cite

Know how to cite

- Provide enough information so we can find the original source
- Use your own words and ideas
- If you repeat another's exact words, you must use quotation marks and cite the source.
- Avoid using others' work with minor cosmetic changes.

When to cite others

- •Anytime you use the ideas or work of other people you need to give them credit by citing them and referencing their work. Ideas and work covers a broad range of things such as:
- •(1) experimental findings
- •(2) summaries or conclusions of experimental findings
- •(3) ideas, explanations or theories proposed by others
- •(4) questionnaires, special stimulus sets, or computer software that that was developed by others
- •(5) images, figures, etc.

Methods

- •The method section gives specific information about what was done in the study or studies.
- Participants
- Stimuli
- •Equipment used while in the study. The purpose of the method section is to allow readers to do two important things —evaluate what was done in order to look for potential problems/limitations in the conclusions or findings and replicate the study.

Methods

Participants.

•(1) number of people who participated; (2) source of the participants and the reason why they are participating; (3) criteria for including or excluding participants; (4) the number participants who participated in the study but whose data are not included in the analyses and the reasons why their data were not included; (5) demographic data that is relevant to the study (gender, age, ethnicity, etc.); and (6) any other characteristic that is relevant to the study and concerns the participants.

Methods

•Apparatus. Describe any equipment that is used in doing the study. This might be computers, computer equipment (devices for presenting stimuli to participants or recording their responses), computer software, physiological amplifiers for collecting brain activity, etc.

Methods

- •Design. Describe the independent variable(s) including (1) the levels of the IV; (2) how it was manipulated (i.e., between-subjects or within subjects); and (3) the operational definition if appropriate. Describe the dependent variable(s) used and include its operational definition if appropriate.
- •Materials. Describe questionnaires or stimuli that were presented to participants in the study.
- •Procedure. Describe everything that occurred when participants engaged in the study.

Writing the Results

- •Descriptive statistics (measures of central tendency, like the mean and measures of variance, like the standard deviation and standard error of the mean).
- •Inferential statistics intended to infer something about the population from the sample you have assessed.
- Measures of effect size.

Discussion

- •In the discussion section, the results are interpreted and discussed in the context of the existing literature.
- •The authors should discuss:
- what the findings mean for existing theories
- implication of the findings for people or other researchers
- future research that might need to answer questions raised by the study
- potential problems or limitations with the research.

Discussion

- •In the first paragraph or two, briefly summarize the findings of the study in non-statistical terms.
- •Discuss the implications of the results for the hypotheses were the hypotheses supported, not supported, or were the results inconclusive. You should also remind readers of the hypotheses because they may not remember them.

Discussion

- •Relate the results to past research, citing that literature appropriately. Discuss limitations or potential problems with the study.
- Discuss possible future research that might be important or interesting (especially relating to any problems with the study).
- •Explain the implications, importance, or theoretical impact of the findings.

How to Make a Reference (APA Style)

Becker, L. J., & Seligman, C. (1981). Welcome to the energy crisis. *Journal of Social Issues*, 37(2), 1-7.

List authors and their initials.

Year in parentheses.

Title.

Italicize name of journal.

Volume italicized.

Issue parentheses.

Page numbers.

Consult the desired journal's requirements

Writing a discussion section...

- Briefly summarize the overall findings of the experiment in non-technical terms
- Review the overall motivation for the study and the hypotheses and discuss whether the results support these hypotheses. Be sure to review the hypotheses with students.

Discussion Section

Explain your results

- Agreements
- Disagreements
- Innovations
- Solidifies support

Finish: Broad generalizations

- To theory
- Real-world implications

Writing Resources

- BUILD Science Writer
- Peer Writing Groups
- Purdue owl
- University Writing Center
 - Located in Library 227
 - Website: UWC.UTEP.EDU

Reading and Summarizing Tips

- 1. Based on the title of the reading, what do you think the article will be about?
- 2. Is there one sentence that describes the main idea for this topic?
- 3. What two words would you use to describe the general idea of the article?
- 4. What details from the selection support this general idea?

Scientific Writing Language

Sentences

- Complete, grammatically correct
- Short, clear

You may be wondering how to read an article

You may need to read it a few times

- 1) Read for general understanding first
- 2) 3 parts to focus on:
 - a) abstract
 - b) intro
 - c) discussion
- 3) Read for specifics during your next reading

Scientific Writing Language

Tenses

- Present Known facts and hypotheses
- Past Experiments you have conducted
- Past Results of an experiment
- Use Active Voice
 - Passive: "It has been discovered that..."
 - Active: "We discovered that..."

Scientific Writing Language

Style

- Use formal language
 - examine vs. look into
 - increased vs. got bigger
 - decreased vs. got smaller
 - Avoid contractions and possessive of things
 - hasn't vs. has not
 - the water molecule's shell vs.
 shell of water molecule

Tips for Surviving Your Honors Thesis

Formatting

Buy the APA or MLA manual

Tips for Surviving Your Honors Thesis

Formatting

 Ask your mentor for a paper that is representative of the writing for your area

Plagiarism

Plagiarism checkers

- Grammarly
- Turnitin.com
- SafeAssign

Plagiarism

- Did I Plagiarize? (see flow chart that was emailed to you)
- Consequences of plagiarism
- •http://www.nytimes.com/2013/04/28/magazine/diederik-stapels-audacious-academic-fraud.html?pagewanted=all& r=0
- •http://www.nytimes.com/2015/05/29/science/journal-science-retracts-study-on-gay-canvassers-and-same-sex-marriage.html
- http://www.apa.org/monitor/2010/07-08/misconduct.aspx