

ENGINEERING WRITING/ENGR 0012

Spring 2014

**ADVICE, EXAMPLES & REINFORCEMENT
OF IN-CLASS INFO**

Abstract Revision/Annotated Bib

Positives About Abstracts

- Many of you have been doing good, solid research!
- You've found interesting, exciting, relevant topics
- Proposal/Abstracts have been, generally, comprehensive

To Improve w Revision

- Topics too broad
- Topics covering two major “things”
 - Bioprinting as THE answer for bones AND organs...
- Sweeping generalizations
 - “Food dyes cause cancer”
 - “everyone is concerned with depleting fossil fuels”
- Language more appropriate for introduction than abstract

Sample Student Abstract Excerpt

See next slide for how to *use* the excerpt in a **revised/improved abstract**

Our paper will provide an overview of nuclear fusion, touching upon the science behind magnetic confinement and the plasma produced. Then we will describe the International Thermonuclear Experimental Reactor (ITER) and assess how funding can quicken the pace at which ITER realizes its milestones. Scientific journals and professional criticisms of ITER and its goals will be evaluated to draw these conclusions. Finally, the reality of applying Tokamaks to the commercial power grid will be analyzed. Tokamaks must prove to be ethically sound and safe for society [5]. It is our belief that the data will prove the vitality of Tokamaks and their necessity to the advancement of mankind.

To Note

- This **was** the FINAL paragraph of the abstract!
- This is exactly the type of language to use THROUGHOUT
- Note how authors (generally) aren't ARGUING here; they are telling us **what their PAPER will argue**
- Our advice to these students was to use this paragraph as the “framework” for the **whole abstract**, filling in brief explanatory detail after each of these sentences

Another Excerpt

In an age of increasing use of robotics, both businesses and engineers are looking for ways to increase productivity and to eliminate waste of time, money, and energy. Our paper argues that with the adaptation of drones in the marketplace, the shipment processes will become faster, more cost efficient, and greener. As a result, this will help relieve many pressing global issues, like global warming, and will boost the economy by increasing company revenues. Because its fusion into society will drastically affect the shipping industry, drone delivery is an important innovation that engineers must explore now.

To Note: Research (& Other) Issues

- The references for this abstract included ONLY the **Amazon website** and newspaper, and magazine articles about the **Amazon drones**. The authors, however, say that a main aspects of this paper are **adaptation of drones in the marketplace** and how **this will help relieve many pressing global issues, like global warming, and will boost the economy by increasing company revenues.**
- According to the authors, the paper **will not be about ONLY Amazon drones**, so further research” **on drones in the marketplace”** and on **“how this technology will help relieve many pressing global issues...”** is **absolutely necessary!**



- **Amazon's proposed use of drones can be an *example* used in the paper**, but if research related to Amazon is the only research the authors are going to do, then they cannot make these claims: the “adaptation of drones in the marketplace” will make “shipment processes faster, more cost efficient, and greener. As a result, this will help relieve many pressing global issues, like global warming, and will boost the economy by increasing company revenue.”
- **BUT: the claims/issues noted above are important and worth investigating and corroborating**, SO the “solution” is to expand the research in ways that will explain/support the claims made about the use of drones in the marketplace.

Also:

- Note use of the term “global warming.” The scientific community prefers the phrase “climate change.”
- Pretty bold claim that this technology will “boost the economy.” Which “economy?” Can the research back this up?

Successful Abstract from Last Year

The focus of this paper will be placed on the role of biomaterials in developing artificial heart valves (AHV). Although many achievements in AHV have been made in the past, the greatest challenge has always stayed current: “The choice of material is the main problem in creating artificial heart valves. [1]” Therefore, the first objective of this discussion is to identify the greatest challenge in artificial heart valves as a challenge in biomaterials; to do so an overview of the general function and structure of artificial heart valves will be provided to allow an examination of the difficulty (in biomaterials) that is common to all the approaches to the creation of artificial heart valves. The current nature of biomaterial problem in AHV will also be illustrated by existing post-implantation complications, including “calcification, cusp tears, pannus growth, infective endocarditis,” [2] that often cause mortality in treatments. The second part of this discussion is to show how past progress in biomaterials has influenced and improved the engineering of AHV products; in this part the correlation will be shown by referencing a few studies; the success of composite polymeric materials [3], among other types of biomaterials, will be looked at in specific details. In addition, the effectiveness of new biomaterial technology will be compared to the effects of other measures (such as surgical methods [4]) in medical treatments in the presence of artificial heart valve dysfunction. The last objective of this paper is to search for areas in biomaterials related to AHVs that are experiencing or nearing breakthroughs, and, given the possibility of breakthroughs in biomaterial technology, this paper will further estimate the levels of success to which AHV might reach in the near future. This paper will end with a discussion of ethical concerns that the breakthroughs in biomaterials might raise. Since ethical issues in engineering can be ambiguous in nature, these issues will be discussed following the guidelines of engineering codes of conduct and popular opinions [5].

To Note

- Incorporate background information into statements of goals and a plan of action for the paper
- We know where they are going from here!
- We know what the paper will do!
- We don't know a ton of their major arguments or background detail
- That's ok! It's just the ABSTRACT!

Policies for Abstract Revision

- ALL students must revise your abstract unless you earned 100%
- Even “accepted” proposals must have revised abstracts when submitting the next assignment
- Provisionally accepted abstracts—may want to contact writing instructor as you move forward
- Not accepted abstracts—MUST contact writing instructor before revising

What is an Annotated Bibliography?

- List of sources you've consulted so far
- Alphabetized by author/first word in entry
- Paragraph beneath the citation explains:
 - The **type** of source and explanation of how it is appropriate for this level of professional conference paper
 - Overall **purpose** or task of the source (what did the authors intend to communicate? What's the argument?)
 - Use of this source in **this** specific paper

Note on Types of Sources

- Sources such as Wikipedia, about.com, and “How Stuff Works” are NOT appropriate for a university-level paper; you can consult such sources early on, but the information is too broad to be useful in a well-researched paper, and the information can be inaccurate!!
- The Engineering Librarians are always willing to assist you; their expertise *will* contribute to optimal research and writing outcomes!

Kinds of Sources & Editing Process

- Newspaper
 - Material is fact checked, articles read by section editor & then editor in chief
- Journal
 - Articles are reviewed by peers in the field (other experts) & then journal editorial staff (also experts in the field)
- Manufacturer/Product Web Site
 - “Articles” are reviewed by marketing team for that company

Effective Annotation

G. Stickney, P. Loizou, L. Mishra, P. Assmann, R. Shannon, and J. Opie. (2005, December 7). "Effects of electrode design and configuration on channel interactions." *Hearing Research*. (Online article).

<http://www.pubmed.central.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubm =16338109&query hl=1&itool=pubmed>

This article, from a professional, peer-reviewed journal specializing in auditory mechanisms, details recent findings on how electrical node interactions affect multichannel cochlear implant performance. The article describes how node placement and other factors can interfere with optimal performance, including voice recognition, of multichannel cochlear implants. Information from this article will help us clarify current cochlear implant problems and aid in our description of possible engineering solutions.

Why Was it Effective?

- Identifies type of source AND gives details about the specifics of the source
- Clarifies intent of article
- Gives a plan for how article will be used in paper

Ineffective Annotation

Stickney, Loizou, Mishra, Assmann, Shannon, and Opie. (2005, December 7). Effects of electrode design and configuration on channel interactions. Hearing Research. <http://www.pubmed.central.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubm=16338109&query hl=1&itool=pubmed>

This article talks about some problems with the mechanics of cochlear implants. People with implants sometimes have trouble hearing what other people are saying. This is called a speech recognition problem. This is a problem engineers will have to work on. We will talk about a few of these issues in our paper.

Why Was it Ineffective?

- Errors in reference format
- Lack of detail
 - What type of source?
 - What does “article” mean here?
 - What “issues” will be discussed in the paper?
 - What was the PURPOSE/argument of the article?

Final Notes

- You'll receive specific formatting instructions via email from Courseweb
- From now on, 3 points will be deducted per formatting error so PAY ATTENTION
- Read the entire assignment, all the way through, at least twice before beginning
- From now on, contact your specific writing instructor (the one who assigned your grade) with questions