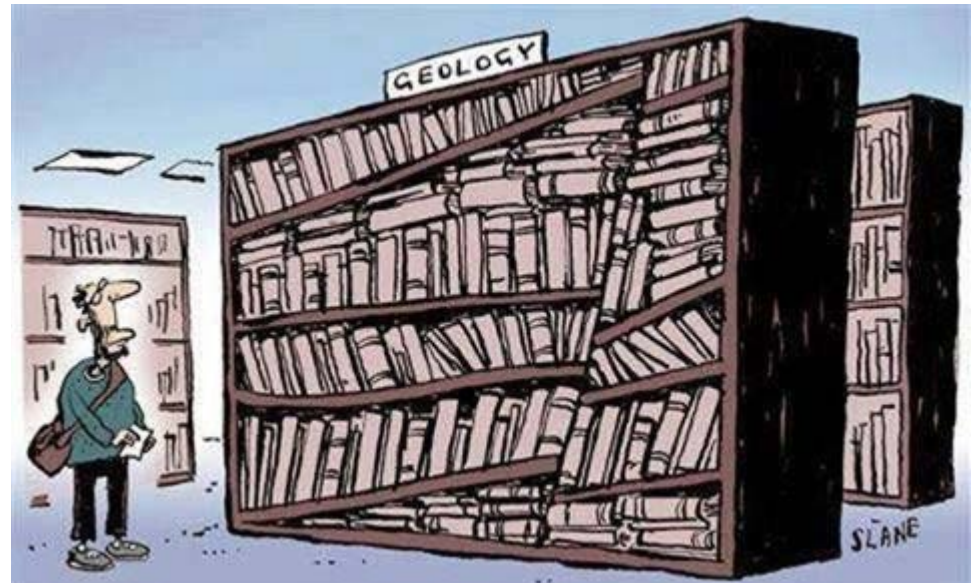


How to write an abstract

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When do you write an abstract?

- Professional meeting, workshop, conference
- Journal paper; technical proceedings
- Grant proposal
- Thesis



Why write an abstract?

- Provides a summary of the contents of thesis, paper, *etc.*
- A well-written abstract will increase your profile and the impact of your work
- Helps you learn to read others' abstracts effectively
- Writing a good abstract is difficult; gets easier with experience



Getting Started

- Check guidelines; every publication will have different text styles, formats and lengths
- Check maximum length; usually number of words; easy to do using word count in WORD
- Title should be informative yet short and snappy (sometimes there is a character limit)



Begin writing

- Break it down into parts:
 - **Purpose**: 1 or 2 sentences, why you studied the topic, what is significant, how does your work add to existing knowledge
 - **Methods**: 1 or 2 sentences, what did you do, how did you collect/analyze data?
 - **Results**: 3-4 sentences about what you found
 - **Interpretation**: 3-4 sentences, what do results mean?
 - **Conclusion(s)**: 1 sentence, what you have learned, why it is significant?



Enjoy the rewards

- Presenting your work to peers is good practice for communicating
- Creating a talk and sharing results of work is a good way to polish skills of communicating technical information
- Public venues of sharing work is good networking and get to learn latest research
- Receive feedback almost immediately



A well-written abstract

Title: Women Engineers in Kuwait: Perception of Gender Bias

Abstract

The greatest obstacle to the development of policies for the curtailment of gender bias is lack of information on the scope and effects of the problem. This study represents an attempt to quantify attitudes toward gender bias among professional women engineers working in the State of Kuwait. The major findings that emerged were as follows: a) Since 1970, Kuwait has witnessed an enormous growth rate in the participation of women in higher education. b) With respect to the job-related factors of salary scale, professional treatment, responsibility, benefits, and vacation, a clear majority (68%) of the professional Kuwaiti women engineers surveyed expressed a feeling of equality with or even superiority to their male counterparts. c) The one job-related factor in which significant gender bias was found to be in operation was that of promotion to upper management positions. In this criterion, the women engineers surveyed felt “less than equal” to their male colleagues.

Critique:

- (1) This abstract begins with a succinct statement of the problem and the objective of the paper.
- (2) Overall results are clearly presented.



A poorly-written abstract

Article Title: Elements of an Optimal Experience

Abstract

This paper presents and assesses a framework for an engineering capstone design program. We explain how student preparation, project selection, and instructor mentorship are the three key elements that must be addressed before the capstone experience is ready for the students. Next, we describe a way to administer and execute the capstone design experience including design workshops and lead engineers. We describe the importance in assessing the capstone design experience and report recent assessment results of our framework. We comment specifically on what students thought were the most important aspects of their experience in engineering capstone design and provide quantitative insight into what parts of the framework are most important.

Critique:

- (1) This abstract begins well with a concise statement of the objectives of the paper, but then wanders from good technical writing style from there.
- (2) The abstract is written in the first person (e.g. “We explain...”, “We discuss...”, “We comment...”, etc.).
- (3) No results are presented. This poorly written abstract describes only the organization of the paper.

Example:

“Next, we describe... We comment specifically on what students thought were the most important aspects of their experience in engineering capstone design...”

Instead, the abstract should summarize the actual results and how they were obtained.

Example:

“A statistical analysis was performed on answers to survey questions posed to students enrolled in a capstone design course at Georgia Tech. The analysis showed that students thought the most important aspects of their experience in engineering capstone design were quality of the instructor and quantity of student/instructor interaction time.”

References

- Anania, V. 2015. A guide to writing an AGU abstract. Eos 96, doi:10.1029/2015EO034617.
- Carey, A.E. 2012. How to write a scientific abstract. Ohio State University. (From: http://undergraduateresearch.osu.edu/suri/materials/abstract_URO_2012.pdf)

