# What exactly is an abstract, and how do I write one?

## Overview

An abstract is a short summary of your completed research. It is intended to describe your work without going into great detail. Abstracts should be self-contained and concise, explaining your work as briefly and clearly as possible. Different disciplines call for slightly different approaches to abstracts, as will be illustrated by the examples below, so it would be wise to study some abstracts from your own field before you begin to write one.

## General Considerations

Probably the most important function of an abstract is to help a reader decide if he or she is interested in reading your entire publication. For instance, imagine that you're an undergraduate student sitting in the library late on a Friday night. You're tired, bored, and sick of looking up articles about the history of celery. The last thing you want to do is reading an entire article only to discover it contributes nothing to your argument. A good abstract can solve this problem by indicating to the reader if the work is likely to be meaningful to his or her particular research project. Additionally, abstracts are used to help libraries catalogue publications based on the keywords that appear in them.

An effective abstract will contain several key features:

1. **Motivation/problem statement:** Why is your research/argument important? What practical, scientific, theoretical or artistic gap is your project filling?

2. **Methods/procedure/approach:** What did you actually do to get your results? (e.g. analyzed 3 novels, completed a series of 5 oil paintings, interviewed 17 students)

3. **Results/findings/product:** As a result of completing the above procedure, what did you learn/invent/create?

4. **Conclusion/implications:** What are the larger implications of your findings, especially for the problem/gap identified previously? Why is this research valuable?

# In Practice

Let's take a look at some sample abstracts, and see where these components show up. To give you an idea of how the author meets these "requirements" of abstract writing, the various features have been color-coded to correspond with the numbers listed above. The general format of an abstract is largely predictable, with some discipline-based differences. One type of abstract not discussed here is the "Descriptive Abstract," which only summarizes and explains existing research, rather than informing the reader of a new perspective. As you can imagine, such an abstract would omit certain components of our four-colored model.

## SAMPLE ABSTRACTS

### ABSTRACT #1: History / Social Science

"Their War": The Perspective of the South Vietnamese Military in Their Own Words
Author: Julie Pham

*Despite the vast research by Americans on the Vietnam War, little is known about the perspective of South Vietnamese military, officially called the Republic of Vietnam Armed Forces (RVNAF). The overall image that emerges from the literature is negative: lazy, corrupt, unpatriotic, apathetic soldiers with poor fighting spirits. This study recovers some of the South Vietnamese military perspective for an American audience through qualititative interviews with 40 RVNAF veterans now living in San José, Sacramento, and Seattle, home to three of the top five largest Vietnamese American communities in the nation. An analysis of these interviews yields the veterans' own explanations that complicate and sometimes even challenge three widely held assumptions about the South Vietnamese military: 1) the RVNAF was rife with corruption at the top ranks, hurting the morale of the lower ranks; 2) racial relations between the South Vietnamese military and the Americans were tense and hostile; and 3) the RVNAF was apathetic in defending South Vietnam from communism. The stories add nuance to our understanding of who the South Vietnamese were in the Vietnam War. This study is part of a growing body of research on non-American perspectives of the war. In using a largely untapped source of Vietnamese history—oral histories with Vietnamese immigrants—this project will contribute to future research on similar topics.*

That was a fairly basic abstract that allows us to examine its individual parts more thoroughly.

**Motivation/problem statement:** The author identifies that previous research has been done about the Vietnam War, but that it has failed to address the specific topic of South Vietnam's military. This is good because it shows how the author's research fits into the bigger picture. It isn't a bad thing to be critical of other research, but be respectful from an academic standpoint (i.e. "Previous researchers are stupid and don't know what they're talking about" sounds kind of unprofessional).

**Methods/procedure/approach:** The author does a good job of explaining how she performed her research, without giving unnecessary detail. Noting that she conducted *qualitative* interviews with *40* subjects is significant, but she wisely does not explicitly state the kinds of questions asked during the interview, which would be excessive.

**Results/findings/product:** The results make good use of numbering to clearly indicate what was ascertained from the research—particularly useful, as people often just scan abstracts for the results of an experiment.

**Conclusion/implications:** Since this paper is historical in nature, its findings may be hard to extrapolate to modern-day phenomena, but the author identifies the importance of her work as part of a growing body of research, which merits further investigation. This strategy functions to encourage future research on the topic.

**ABSTRACT #2: Natural Science**

"A Lysimeter Study of Grass Cover and Water Table Depth Effects on Pesticide Residues in Drainage Water"
Authors: A. Liaghat, S.O. Prasher

*A study was undertaken to investigate the effect of soil and grass cover, when integrated with water table management (subsurface drainage and controlled drainage), in reducing herbicide residues in agricultural drainage water. Twelve PVC lysimeters, 1 m long and 450 mm diameter, were packed with a sandy soil and used to study the following four treatments: subsurface drainage, controlled drainage, grass (sod) cover, and bare soil. Contaminated water containing atrazine, metolachlor, and metribuzin residues was applied to the lysimeters and samples of drain effluent were collected. Significant reductions in pesticide concentrations were found in all treatments. In the first year, herbicide levels were reduced significantly (1% level), from an average of 250 mg/L to less than 10 mg/L. In the second year, polluted water of 50 mg/L, which is considered more realistic and reasonable in natural drainage waters, was applied to the lysimeters and herbicide residues in the drainage waters were reduced to less than 1 mg/L. The subsurface drainage lysimeters covered with grass proved to be the most effective treatment system.*

**Motivation/problem statement:** Once again, we see that the problem—more like *subject of study*—is stated first in the abstract. This is normal for abstracts, in that you want to include the most important information first. The results may seem like the most important part of the abstract, but without mentioning the subject, the results won't make much sense to readers. Notice that the abstract makes no references to other research, which is fine. It is not obligatory to cite other publications in an abstract, and in fact, doing so might distract your reader from YOUR experiment. Either way, it is likely that other sources will surface in your paper's discussion/conclusion.

**Methods/procedure/approach:** Notice that the authors include pertinent numbers and figures in describing their methods. An extended description of the methods would probably include a long list of numerical values and conditions for each experimental trial, so it is important to include only the *most important values* in your abstract—ones that might make your study unique. Additionally, we see that a methodological description appears in two different parts of the abstract. This is fine. It may work better to explain your experiment by more closely connecting each method to its result. One last point: the author doesn't take time to define—or give any background information about—"atrazine," "metalachlor," "lysimeter," or "metribuzin." This may be because other ecologists know what these are, but even if that's not the case, you shouldn't take time to define terms in your abstract.

**Results/findings/product:** Similar to the methods component of the abstract, you want to condense your findings to include only the *major result* of the experiment. Again, this study focused on two major trials, so both trials and both major results are listed. A particularly important word to consider when sharing results in an abstract is "significant." In statistics, "significant" means roughly that your results were not due to chance. In your paper, your results may be hundreds of words long, and involve dozens of tables and graphs, but ultimately, your reader only wants to know: "What was the main result, and was that result significant?" So, try to answer both these questions in the abstract.

**Conclusion/implications:** This abstract's conclusion sounds more like a result: "…lysimeters covered with grass were found to be the most effective treatment system." This may seem incomplete, since it does not explain how this system could/should/would be applied to other situations, but that's okay. There is plenty of space for addressing those issues in the body of the paper.

**ABSTRACT #3: Philosophy / Literature**
[Note: Many papers don't precisely follow the previous format, since they do not involve an experiment and its methods. Nonetheless, they typically rely on a similar structure.]

"Participatory Legitimation: A Reply to Arash Abizadeh"
Author: Eric Schmidt, Louisiana State University, 2011

*Arash Abizadeh's argument against unilateral border control relies on his unbounded demos thesis, which is supported negatively by arguing that the 'bounded demos thesis' is incoherent. The incoherency arises for two reasons: (1) Democratic principles cannot be brought to bear on matters (border control) logically prior to the constitution of a group, and (2), the civic definition of citizens and non-citizens creates an 'externality problem' because the act of definition is an exercise of coercive power over all persons. The bounded demos thesis is rejected because the "will of the people" fails to legitimate democratic political order because there can be no pre-political political will of the people. However, I argue that "the will of the people" can be made manifest under a robust understanding of participatory legitimation, which exists concurrently with the political state, and thus defines both its borders and citizens as bounded, rescuing the bounded demos thesis and compromising the rest of Abizadeh's article.*

This paper may not make any sense to someone not studying philosophy, or not having read the text being critiqued. However, we can still see where the author separates the different components of the abstract, even if we don't understand the terminology used.

> **Motivation/problem statement:** The problem is not really a problem, but rather another person's belief on a subject matter. For that reason, the author takes time to carefully explain the exact theory that he will be arguing against.

> **Methods/procedure/approach:** [Note that there is no traditional "Methods" component of this abstract.] Reviews like this are purely critical and don't necessarily involve performing experiments as in the other abstracts we have seen. Still, a paper like this may incorporate ideas from other sources, much like our traditional definition of experimental research.

> **Results/findings/product:** In a paper like this, the "findings" tend to resemble what you have concluded about something, which will largely be based on your own opinion, supported by various examples. For that reason, the finding of this paper is: "The 'will of the people,' actually corresponds to a 'bounded demos thesis.'" Even though we aren't sure what the terms mean, we can plainly see that the finding (argument) is in support of "bounded," rather than "unbounded."

> **Conclusion/implications:** If our finding is that "bounded" is correct, then what should we conclude? [In this case, the conclusion is simply that the initial author, A.A., is wrong.] Some critical papers attempt to broaden the conclusion to show something outside the scope of the paper. For example, if A.A. believes his "unbounded demos thesis" to be correct (when he is actually mistaken), what does this say about him? About his philosophy? About society as a whole? Maybe people who agree with him are more likely to vote Democrat, more likely to approve of certain immigration policies, more likely to own Labrador retrievers as pets, etc.

**Applying These Skills**

Now that you know the general layout of an abstract, here are some tips to keep in mind as you write your own:

**1. The abstract stands alone**
- An abstract shouldn't be considered "part" of a paper—it should be able to stand independently and still tell the reader something significant.

**2. Keep it short**
- A general rule of abstract length is 200-300 words, or about $1/10^{th}$ of the entire paper.

**3. Don't add new information**
- If something doesn't appear in your actual paper, then don't put it in the abstract.

**4. Be consistent with voice, tone, and style**
- Try to write the abstract in the same style as your paper (i.e. If you're not using contractions in your paper, the do not use them in your abstract).

**5. Be concise**
- Try to shorten your sentences as often as possible. If you can say something clearly in five words rather than ten, then do it.

**6. Break up its components**
- If allowed, subdivide the components of your abstract with bolded headings for "Background," "Methods," etc.

**7. The abstract should be part of your writing process**
- Consider writing your abstract *after* you finish your entire paper.
- There's nothing wrong with copying and pasting important sentences and phrases from your paper … provided that they're your own words.
- Write multiple drafts, and keep revising. An abstract is very important to your publication (or assignment) and should be treated as such.

**Resources:**

"Abstracts." The Writing Center. The University of North Carolina, n.d. Web. 1 Jun 2011.
http://www.unc.edu/depts/wcweb/handouts/abstracts.html
"Abstracts." The Writing Center. Rensselaer Polytechnic Institute, n.d. Web. 1 Jun 2011.
http://www.rpi.edu/web/writingcenter/abstracts.html

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