The Anatomy of an Abstract

An abstract is a short (usually one paragraph long) synopsis of a larger work or publication that can stand apart from the larger text. Abstracts typically have several parts, and the purpose of this handout is to dissect them in order to help you approach writing an abstract with ease. A good abstract should be able to stand alone, and it should not directly quote the article or major work it belongs to. Below is an example abstract with an imagined **purpose of indexing in an online database.**

Substances with largely unknown safety are appearing in the products consumers use every day, which poses a risk to public health. Of all the industrial chemicals in consumer products, only 3 percent of them have been comprehensively tested to ensure their safety. Animal studies are the industry standard in safety testing, but they are ineffective, costly, and time consuming. Researchers developed a new algorithm and database for analyzing and identifying potentially harmful substances. Using data from Europe's REACH (Registration, Evaluation, Authorizations, and Restriction of Chemicals), the team used a supercomputer to combine data from existing public databases into one large database. Using properties of similar chemicals, the computer can predict whether an untested chemical is hazardous. The researchers used existing data to test the computer's accuracy compared to traditional animal studies in identifying toxic chemicals. Their database found the toxic substances in 89 percent of cases, compared to 70 percent in corresponding animal studies. If the database is validated by the U.S. government, it could potentially save the US $1 billion and more than 2 million animals.

Reason

- The first sentence in red demonstrates to the reader why they should care about the work. Much of this information can often be found in the introduction or beginning of an article.

Problem

- Reason and problem, in red and yellow respectively, are often closely related. Either one can come first, and it depends on context and purpose.
- Together, the reason and problem should frame the rest of the ideas contained in the abstract.

Methods

- The methods piece of the abstract, in purple, is clear and concise. It is not necessary to go over miniscule details. This abstract provides a brief overview of the methods.

Findings

- The results are given in green, and only one important finding is noted.
- This abstract gives the reader a small taste of the results that leaves them wanting to read the rest of the paper.

Implications

- The implications in blue help to illustrate the lasting impact the work can have.
- Abstracts usually include results and implications, but occasionally certain contexts will ask for these parts to be left out.

This abstract is based on the article "Artificial intelligence outperforms the repetitive animal tests in identifying toxic chemicals" on theconversation.com.