

Types of Articles

Article: When scientists have information or an experiment to add to the body of knowledge in their field of study, they usually write up their findings for inclusion in a scientific journal. Before it is published, these articles go through a process of peer review. Articles are usually between five and twenty pages and are complete descriptions of current original research findings, but there are considerable variations between scientific fields and journals – 80-page articles are not rare in mathematics or theoretical computer science.

In the sciences, a Journal Article is sometimes called a **Scientific Article**, a **Peer-Reviewed Article**, or a **Scholarly Research Article**. Together, journal articles in a particular field are often referred to as **The Literature**.

Journal articles are most often **Primary Research Articles**. However, they can also be **Review Articles**. These types of articles have different aims and requirements. Sometimes, an article describes a new tool or method.

Because articles in scientific journals are specific, meticulously cited and peer-reviewed, journal databases are the best place to look for information on previous research on your species. Without a background in the field, journal articles may be hard to understand - however, you do not need to understand an entire article to be able to get valuable information from it.

Reading a journal article may lead you to a number of other journal articles on closely related topics. When reading a journal article, mark the citations that you are interested in. Later, you can find those articles to continue your search.

Evaluating journal articles

When deciding which articles to use to support ideas and arguments in your paper, keep these criteria in mind:

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| Accuracy | Is this article fact or opinion? Are counter-arguments acknowledged? Are the results accurate and are they supported by the data and methodology presented? Does this support or contradict other articles? Are references to other works given? |
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| Authority | <p>Is the author an expert in this field?</p> <p>What other works has he/she written?</p> <p>Can you find out more about the author? What is his/her background?</p> <p>Has this author been cited by others?</p> |
| Bias | <p>Some publications have an inherent bias that will impact articles printed in them. Can you determine this from looking at the journal?</p> <p>Is the author's point of view impartial and objective? Are counter-arguments acknowledged?</p> |
| Audience level | <p>What audience is the article designed for?</p> <p>Is it too basic or too technical for your needs?</p> |
| Currency | <p>It is usually easy to determine the publication date of an article.</p> |

Primary Articles

The most common type of journal article you will find in the sciences deals with **primary research**. These articles describe an original experiment or analysis that adds to current knowledge a particular topic. These articles will include background information, the methods the scientist used, a description of the results, and an analysis of what the results mean in the context of current knowledge.

Review Articles

Review articles synthesize current research on a specific topic. Often an article will summarize past research, identify important people in the field, outline recent advances, and point out gaps in a body of knowledge. Review articles are often located in the same journals as primary research articles, but do not report original research.

Review articles are a great resource if you're looking for an overview of a small topic, with complete and current information. Review articles are well-cited, so they can provide a starting point for more extensive research. Review articles do not cover original research but rather accumulate the results of many different articles on a particular topic into a coherent narrative about the state of the art in that field.

Review articles provide information about the topic and also provide journal references to the original research. Reviews may be entirely narrative, or may provide quantitative summary estimates resulting from the application of meta-analytical methods. **Review article** summarize the results of significant studies or experiments, often attempting to identify trends or draw broader conclusions. Although scholarly, it is not considered a primary source or research article, but its references to other articles will include primary sources or research articles.

Supplemental articles contain a large volume of tabular data that is the result of current research and may be dozens or hundreds of pages with mostly numerical data. Some journals now only publish this data electronically on the internet.

Research article: an article reporting on the results of one or more studies or experiments, written by the person(s) who conducted the research. This is considered one type of primary source. Look in the title or abstract for words like study, research, measure, subjects, data, effects, survey, or statistical which might indicate empirical research.

Theoretical article: an article containing or referring to a set of new or established abstract principles related to a specific field of knowledge; characteristically it does not contain original empirical research or present experimental data, although it is scholarly.