

Section 1. Research Writing Basics

Unit 3. Organization of
a research paper

Today we will walk you through the research article from the beginning to the end.

Unit 3 of our course will cover all essential elements of a research article, emphasizing their peculiarities and functions.

An important point to start with is to emphasize that there is no standard or uniform style that is followed by all journals. Each journal has its own style; different journals have different instructions to authors. However, there are some common elements that a research paper typically consists of.

Let's suppose we open a scientific journal and now we are looking at an article. What does it start with?

The first thing that comes into focus is the **title**. When a reader browses through the table of contents of a journal issue or searches on the Internet, the title is the “first detail” or “face” of the paper. It provides a concise and informative description of the research topic. The title of the paper will be read more than any other part, therefore must be neat, crisp, and coherent to attract the reader's attention. The important words should be placed first and appropriate words should be used to highlight the significant content of the paper. The words chosen should also be in a form suitable for abstracting and indexing services.

We will later have a separate overview of the title component in our video lectures, touching upon its grammar and vocabulary peculiarities.

Below the title you can usually see some **information about the authors**. This information may include the authors' names, additionally authors may provide affiliations (such as the university or organization they are affiliated with), and contact details (such as emails).

A contemporary practice (illustrated on this slide) is to list the authors in the logical order of importance of their contribution to the work. That means that the person listed first is considered the senior author. The authors' credentials or qualifications may also be mentioned to establish their expertise in the field.

After this comes the **abstract**. This is a brief summary of the entire research paper. An Abstract is a mini-version of the paper. Journals have strict limitations on the length of abstracts, usually in the range of 150–250 words, and written in one paragraph. Now that you know what IMRD format is, consider the abstract as a very concise way to give one sentence descriptions of each of the sections. The abstract highlights the main objectives, methodology, findings, and conclusions.

Both the title and the abstract are the most important parts of a research paper – for editors (to decide whether to process the paper for further review), for reviewers (to get an initial impression of the paper), and for the readers (as these may be the only parts of the paper available freely in open access).

Finally, the opening part of the research article gives **key words**. These are words by which the paper should be indexed by abstracting services. The words that are used by the research engines. Note, that words that appear on the title should not be repeated as keywords because titles and keywords are listed together by abstracting services.

The main body of the research paper is structured according to **IMRD format** – just to remind you, these are *introduction, methods, results and discussion*. However, an article never ends with the discussion. What other elements should a research article incorporate?

In addition to the *discussion section*, some articles have *conclusions*. While **discussion** focuses on analyzing and interpreting the results of the study, the conclusions section summarizes the main findings and presents the overall conclusions and implications. The **conclusions** section may also discuss the practical implications of the findings, suggest recommendations for further research, and discuss any limitations or constraints of the study. It aims to provide a clear and concise summary of the study's main outcomes and their broader implications.

Next come **acknowledgements**. This short section is for thanking the institutions and individuals who helped significantly in the work reported in the paper. It acknowledges help from a granting agency that supplied funds or a laboratory that supplied materials, or in a specific way to a person who gave you advice or helped you in data collection or analysis, or any other significant manner.

An obligatory part of any research is **references**, a list of all the sources cited in the research paper, following a specific citation style. Preparing a proper reference list is one of the most tedious aspects of finalizing a manuscript for publication. Part of the problem is that there is no standard or uniform format for citing literature, except that some software programs are available that aid in formatting reference sections.

Russian students should be aware of the difference between *references* and *bibliography*. These are two related but distinct sections in a research paper. Here is the difference: the **reference** section is a list of all the sources that have been directly cited or referenced within the research paper. The rule is the following: "All citations in the text, and only those, must be listed in the References." In other words, the reference section and text citations should match perfectly. The purpose of the reference section is to provide readers with the necessary information to locate and verify the sources used in the research.

The **bibliography**, on the other hand, is a broader list of sources that were consulted or considered during the research process but may not have been directly cited in the paper. It includes not only the sources referenced in the paper but also additional relevant sources that contributed to the researcher's overall understanding of the topic. The bibliography may include books, articles, websites, reports, or any other sources that were used for background information or to gain insights into the subject matter.

Any additional information that is relevant to the paper, but is of secondary importance, may be added as an **appendix**, subject to the journal's policy. Mind the grammar – the plural form of appendix is appendices. These are supplementary materials such as raw data, questionnaires, or additional information that supports the research but is not included in the main body of the paper.

To summarize, in this video we have conducted a comprehensive analysis of a research article, examining it from the title to the references. That's all for today. In our upcoming video, we will take a specific research article for a more in-depth analysis.