



The Fundamental Base of Creating a Scientific Text

Axmedova Dilrabo Ikrambayevna

Teacher of Samarkand State Institute of Foreign Languages

Abstract: References on "Introduction, Methods, Results, and" "Discussion" – the generally recognized international form of science. Article – currently widely available to Uzbek researchers, and now a unique format for research papers. However, many writers, especially beginners, still face the problem because of a lack of knowledge about the format. The article investigates all materials concerning stages of research work, moreover, this article is helpful for beginning authors since it provides information about the rules of writing a research paper, so while observing this material readers find out the research process from top to bottom and learn all the details about how to conduct an effective and well-thought-out research. By the end of this article, you'll have the tools you need to crush your research project!

Key words: scientific forum, title, abstract, research hypothesis, statistics in scientific writing, abbreviations, acronyms, contractions, lacunae.

Introduction

Science is a field of human activity, formulating objective knowledge of the subject's existence and theoretically, systematization tasks.

This area includes:

- scientific concepts, principles and axioms, scientific laws, theories and hypotheses, empirical scientific facts, methods, methods and continuous development of knowledge in the form of research paths system;
- create and develop mentioned above these knowledge systems directed to folk art;
- institution providing working conditions, objects, tools, and scientific work of human creativity.

The development of science begins with the collection of facts, they are studied, systematized, generalized, and explain the known and scientific knowledge that allows predicting new and will open some laws to create logically structured systems of scientific knowledge. Principles (postulates) and axioms - are considered a state of the beginning of scientific knowledge, it is the initial form of systematization, doctrine, theory, etc. The highest form of generalization and systematization of scientific knowledge is the definition. This generalizes and perceives existing objects, processes, and events, as well as predicts new ones. Represent the scientific principles, laws, and methods that enable research Scientific laws are an important component in the system of scientific knowledge. Usually, scientific laws include general concepts, and categories. Scientists use the hypothesis when they lack factual material. The hypothesis is a scientific assumption requiring experimental testing and it is theoretically substantiated as a functioning scientific theory.

Main body

Main stages of scientific research

Purposes of scientific research or research work are divided into main types according to scientific depth and degree of connection with nature or industry: fundamental (theoretical), practical and developmental.

Fundamental (theoretical) study of new laws of existence discover, define relationships between phenomena, a new theory, and principles directed towards creation. They expand social knowledge and enable a deeper understanding of the laws of nature. These studies are considered the basis (foundation) of social production.

Practical research is aimed at developing a scientific base.

Experimental design work (EDW) results from practical (or fundamental) research, technologies, developments creation and development of new production technology or used to improve existing samples. EDW in the process, scientific research turns into technical proposals.

The process of performing fundamental and applied research work includes several key steps. It makes sense serially arrange.

Stage 1. Justification and expression of the relevance of the chosen topic:

- ✓ with issues related to future research and acquaintance with foreign literary sources, substantiation of their relevance;
- ✓ identification of important areas of research problems and classification;
- ✓ presentation of the topic and creation of an abstract of the study;
- ✓ development of technical specifications and drawing up a plan for research work

Stage 2. Expressing the purpose and objective of the study:

- ✓ selection of a bibliographic list of foreign publications and compilations (monographs, textbooks, articles, patents, discoveries, etc.), as well as the preparation of a scientific and technical report on the chosen topic;
- ✓ registration of annotations of sources and abstracts on the topic;
- ✓ analysis of the situation of questions on the topic;
- ✓ setting goals and objectives of the study.

Stage 3. Theoretical research

- ✓ choice of object and subject of research, study of its physical essence, and formation of a working hypothesis based on a research assignment;
- ✓ determine the model according to the working hypothesis and study it;
- ✓ development of the theory of the problem under study and analyze research results [3, p.52].

Writing a scientific paper is a significant part of science and the field of research. This includes the process of reflecting on observations that need to be submitted to scientific forums. Clearly communicating validated scientific data is a skill that can be learned during the writing process. It's not a difficult process, but it just takes some time. This article gives you a good idea of how to start from scratch when writing an academic paper. Scholarly articles enrich knowledge, influence society, and contribute to academic and scientific progress. Many colleges, societies, and companies award points for scientific papers for career performance programs and promotions. In order to write a good scientific article researcher should follow the path shown in Figure 1 before starting to write an academic paper.

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|---|
| Choose the title of the scientific work |
| Abstract |
| Introduction |
| Basics of manuscript preparation and general writing tips |
| Method and materials |
| Result, Discussion, and Conclusions |

The title and direction is one of the essential factors in writing scientific work. Effective titles in academic research papers have several characteristics. The title should be exact, clear, and suitable for the content. Surely it should attract other researchers. In order to look for the consideration of the peruser the title should reflect the setting or method of the consideration and result if it possible. But it does not mean that the researcher should overstate the subject of the title or make it too lengthy just it should be self-explanatory. If researchers take these characteristics into account in their research papers while choosing a title, they make the first fundamental and effective step in writing an article.

The next essential step is the direction of the research paper. In research work, there are different directions and problems. The scientific direction is the sphere of scientific research of a research team dedicated to solving any major, fundamental theoretical and experimental problems in a particular branch of science. The problem is a complex scientific task that covers a significant research area with promising value. The problem consists of a number of topics. A topic is a scientific task covering a specific area of scientific research. It is based on certain scientific questions. Scientific questions are understood as smaller scientific tasks related to a specific field of scientific research. Setting (choosing) problems or topics is a difficult, responsible task and includes a number of points.

1) Formulation of the problem.

- The problem arises when the old knowledge is no longer capable, and the new one has not yet developed enough to give answers to emerging questions.
- A problem in science is a controversial situation that needs to be resolved.
- The correct formulation of the problem is half the success, because it means the ability to separate the main from the secondary and separate what is known from what is unknown on the topic of research, and this determines the search strategy.
- Based on the analysis of contradictions of the studied direction formulate the main question-problem and define in general terms the expected result

2) Development of the problem structure:

- divide the problem into topics, subtopics, and questions;
- for each of these components, an indicative area and the scope of upcoming research are determined. We identify our research paper's title, direction, and problem now slightly move to the abstract. Most readers prefer reading abstracts than reading the entire research paper. Abstracts should therefore contain important summary features of the study. You should start with background knowledge and literature gaps. A gap (Lacuna) (pl. lacunae or lacunas) is a gap in a manuscript, inscription, text, painting, or musical work. Manuscripts, texts, or sections with gaps are called "lacunose" or "lacunose". Materials and methods, as well as the main results in the final line, should be reflected. Abstract consists of three main types:

(a) A structured abstract grouped by Foreground, Objectives, Materials and Methods, Results, Conclusions, and clinical importance; (b) Indicative abstract is written as a single paragraph. (c) an informative abstract forming an integral part of the original article. Briefly abstract is the content of the journal manuscript for busy researchers who wants to shortcut their time for time-consuming materials and guide to the most important parts of the manuscript's content

Many readers will only read the abstract of your manuscript. Therefore it must be able to stand on its

own. For the most part, the abstract is the only part of the article that appears in indexed databases such as Web of Science and Google Scholar and is therefore the most accessed part of the article. If you make a good impression, researchers will be encouraged to read your full paper. The abstract should answer the following questions about the manuscript:

- ✓ what did you do?
- ✓ Why did you do that?
- ✓ Why are these insights useful and important?

Answering these questions will help readers get to know the gist of your research and help them decide whether to read the rest of your work. Then researcher should choose keywords. Keywords are tools that help indexers and search engines find relevant articles. If a database search engine can find your journal manuscript, other readers find it too. This will increase the number of people who read your manuscript and potentially increase the number of citations.

However, to be effective, the researcher needs to choose his/her keywords carefully. Firstly they should outline the content of the manuscript secondly chosen keywords should specialize in the researchers' specialty or sub-specialty. The majority of beginner authors utilize abbreviations in their research papers and lack knowledge of how to use them correctly they make crucial mistakes that make their work unclear. Abbreviations are shortened forms of words and phrases and are often used in research papers because they help make highly complex technical documents more concise and readable. However, it can also cause a lot of confusion and make work unclear if not used carefully. Abbreviations are generally not allowed in academic documents. Abbreviations that are common and readily understood by the majority of the audience can be used without prior definition.

"USA" If the term is unfamiliar, you should use it in its entirety first. for example:

"CLT" - communicative language teaching.

Partially our article is finished, the next essential part is the method and material. In general, this section should provide a brief description of the materials, procedures, and equipment which is used and it involves how the study was conducted, how data were collected, and statistical and/or graphical analyzes are performed by the researcher.

The methods section in the research paper always comes after the introduction and before the result, discussion sections should describe what was done by the researcher to answer the research question. Furthermore, it should describe how it was done, justify the experimental design, and explain how the results were analyzed. A research method is one of the most important sections of an academic paper or paper that describes the methods and techniques used to conduct research. By applying the same methods, all scientists or researchers should achieve the same scientific results. What Researchers Should Do to Write a Perfect Materials and Methods Section

1. It is important to clearly describe the research subject in the context of the research hypothesis. This determines the range of conclusions that can be drawn from the study. Readers of your article will want to know whether the sampling method you choose is representative of other studies. It should include the following information:

If the subject of the study is a human, key demographics should be provided.

Age, gender, race composition (if necessary), etc [2, p.45].

Example

"Subjects in this study were a cohort of adult males admitted to the emergency room of XXX hospital in Samarkand with complaints of chest pain, headache, and with fever. Patients were Caucasian, Kazakh, and Uzbek. Their age ranged from 25 years. ranged to age 65" (different inclusion criteria were applied to this group before inclusion in the study).

Now that your readers know what your material was like, they will want to know how you did your research. Note that you need to provide just enough information for a colleague, who is likely as

familiar with standard methods as you, to replicate your study. A common drawback of method sections is that they are too verbose.

To avoid this, use clear and concise sentences. Try not to use very short sentences as they make the description too long. Remember that your readers are likely working in the same field as you. For instance

The teacher divided the class into two groups, the first should work with the traditional method, and the remaining with modern method. such a description will mislead the reader. However, if you write: "According to the given task class was divided into two groups, the first group provide the lesson with direct method, and the other choose project-based learning" the reader will get a much better idea of the technique.

When describing the methods used to conduct research, the exact sequence of tasks should be described.

- ✓ Description of initial conditions, including baseline measurements
- ✓ a description of the tests should be performed in order
- ✓ Measure and register all changes as a result of the above tests

The Results section provides a summary of the most important results and gives necessary explanations for each of them. At the same time the purpose of the research, Methodological details can be clarified. The results obtained are compared with data from similar studies or previously predicted results. In this section, the researcher can also contain a description of the challenges faced during the study. The 'Results' section should only contain the results/ findings of the study. Researchers utilize tables, charts, graphs, and other figures to display data which analyzed during the study (which can be placed in the text or on a separate page at the end of the manuscript). Firstly researcher should write in an academic, impartial, and objective tone to enhance their credibility as a scientist then Provide a clear topic sentence that connects the author's findings of the research question. Over time, identify key insights relevant to your research question. As a scientist, you should take into account negative results as they may undermine your credibility as a scientist. And what you should not do in this section of your article:

- ✓ do not attempt to discuss, or interpret results in the Results section.
- ✓ always be specific when presenting results, avoiding vague terms and generalizations.
- ✓ do not present raw data that can be summarized or visually displayed.
- ✓ avoid presenting the same data multiple times and decide which format best conveys it.
- ✓ do not present data that are not related to your research question [4, p.61].

The discussion part is one of the final parts of a research paper, where authors describe, analyze and interpret their findings. They explain the implications of these results and bring everything back to the research question. The "discussion" includes the interpretation and evaluation of the obtained results. Among other things, the author analyzes how the results that he/she obtained correlate with the data of other studies, gives recommendations for further study of the problem and formulates his/her conclusions. Part of the discussion may be "repetition of key points from previous sections" [1, p.96]. "Discussion" is closely related to "Results", and they are often combined into one section "Results and discussion". The strong discussion part includes:

State the main conclusion of the work in 1-2 sentences.

Explain how the paper's findings help answer the big questions posed in the introduction.

Explain how (and why) this work matches or disagrees with other similar works.

Conclusion.

For those who are preparing a publication for the first time, it is usually very difficult to see it from this point of view. Nevertheless, this information and format gaining such a perception is the key to

the researchers' successful work on his own text, and careful acquaintance with auxiliary literature can significantly reduce the number of possible difficulties.

The art of writing a research paper involves setting goals the work should start. The author sets himself a task, solves it, and based on the results comes to the conclusion that it can be achieved. The researcher creates a plan and follows it. Beginner authors study and draft their text. It must be remembered that goal setting is required first. And finally, a summary of the results achieved. It is necessary to rely on the research already carried out in this area. The results of individual development must be novel and valuable.

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