ICYSS

INSTRUCTION FOR DESIGNING AND WRITING A RESEARCH PAPER AND APSTRACT

I SCIENCE, ITS ROLE AND TASKS

Science is a set of methodologically acquired and systematized knowledge from a certain area of social life, whether they are phenomena or objects.

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1.1. The concept of science

- Science is a universal creation of people and essentially cannot be reduced to a personal or national (state) level.

- It should represent the strongest energy (crucial force, critical mass) in the development of society.

- It has no homeland and is a common good - no one should have a monopoly on science.

- As one of the basic heritage of man, it is one of the most valuable achievements of mankind.

1.2. Who can do science?

In order for an individual to engage in science, it is necessary to:

• Be physically and mentally fit
• Understands the logic and essence of the thought process - concepts, judgments and conclusions
• Successfully constructs courts
• Successfully draws conclusions
• To be introduced into science by competent persons
• To have a gift and a predisposition for science - the quotient of intelligence
Any individual with average intelligence can successfully engage in science.

• To understand that science is a set of related facts that give a new understanding of something and / or a new product, etc.

1.3. Science accelerates development and allows for progress

- The development of society directly depends on the development of science and its application.

- It is an indisputable fact that science is a key factor in the development of civilization.

- Scientific creativity reflects on the quality of life as a whole.

- Very fast and high scientific and technological development is a feature of modern society.

In the field of biology - genetics, the given development can be illustrated in the following way:

• Great success in the construction of the first mechanical red blood cells
• Application of genetic engineering to nerve stem cells
• Successful cloning of a large number of animal species
• The rice genome is completely deciphered, while the human genome is "read" about 95%
• Space probes have successfully landed on Mars

1.4. Tasks of science

The basic task of science is to discover various phenomena and laws in nature and society, and to put them in the service of humanity. The discovery of legality and new discoveries significantly affects the overall development and progress. It is clear to everyone that without science there is no development, and without development there is no progress.
In order to arrive at a research result at all, one must follow a valid path, with the question:

"What should science (research) do?"

SCIENCE TASKS ARE ACHIEVED THROUGH ANSWERS TO THE FOLLOWING QUESTIONS:

WHAT?

HOW?

WHY?

What are we researching?

- What does a certain scientific field research and what is the subject of a specific research?
- What is achieved by the given research?
- Practical and theoretical aspects
- What materials and methods should be used to carry out the planned research?

How do we research?

- How to provide material conditions?
- How to choose the appropriate methodology?
- Can research by description be put into practice or must research involving experimental work be resorted to?

Why are we researching?

- A scientific explanation (finding, book, paper, etc.) provides an answer to the question why we are researching something.
- All jobs are performed for a specific interest (general, social, intellectual, spiritual, material, personal).
- Science starts from the general interest in order to provide both objective truths about a specific subject of research (short-term goal), and a safer and better life for all people, that is. humanity (long-term goal).

II METHODOLOGY RESEARCH WORK

Methodology is the most important applied science. There is no science or practical solutions without methodology and research methods, just as there is no mathematics without numbers, letters without character, digital techniques without computers, etc.

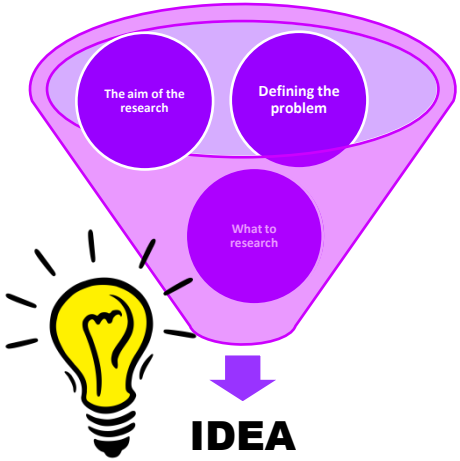
The concept of method

Every intellectual or manual work will be done faster, better and safer if it is done according to plan - methodically, that is. by the most suitable method.

A method is a set of procedures and ways of working to most easily reach a certain goal.

Methods are often equated with methodology, which is bad, since methodology is a scientific discipline, and methods are a means to an end - the appropriate result (s).

The "classic" research process



IDEA

A review of the literature that is relations to research

Reading and studying everything on the mentioned topic

What else needs to be explored and how?

?

Research methodology

Collecting data

Conclusions and recommendations

Discussion of the facts found

Show all information and draw conclusions

Defining the problem

- Topicality of the field, professional-scientific and social justification, lack of knowledge about the problem
- Possibility of processing the problem, benefit (s) from the obtained results, inclination and ability of the researcher / author according to the specific field

Review of related literature to research

- Primary sources - documents that are carriers of information about a particular problem
- Secondary sources - journals and monographs
- Sources of professional and scientific information
- Scientists and experts in certain fields
- (congresses, symposia, professional meetings, etc.)

BASIC METHODS

The basic methods that are, more or less, applied in all scientific fields include:

inductive method

deductive method

method of analysis

synthesis method

comparative method

historical method

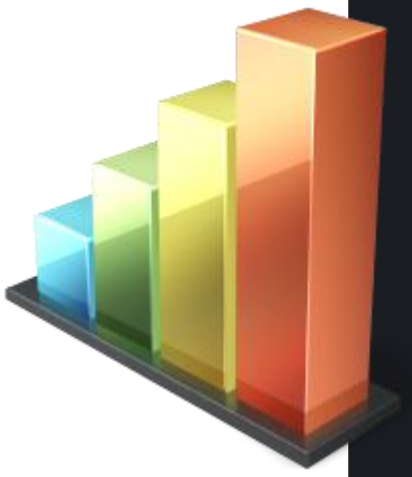
statistical method

method of observation

experimental method

analog method

sociological method



Problems

Classical research is not easy. Why?

- Time limit
- The need for the possibility of collecting data on the spot (so-called "raw data") in the field of research
- Difficulties in choosing key aspects due to limiting factors
- The need to find appropriate literature
- Defining the essence of research
- Experimental works are usually more demanding than theoretical ones, and include:
- Choosing the right (right) solution in their implementation
- The necessity of an appropriate theoretical basis
- Supervision to a greater extent

The key goal of any research work is to obtain new results of potential importance and significance in a broader context.

It includes the author's original contribution to the theory and / or practice to which the paper refers.

III STRUCTURE RESEARCH WORK

Due to the large number of researchers and scientists in all fields of human activity, there is a need to standardize the presentation of research results.

Scientific or research work, as a form of someone's research, must give a clear insight into each step of the research process, previously known facts, ideas, methods, research problems and their solutions, research results and discussion, final conclusions and literature used.

All this is necessary in order to clearly present to the reader the whole, often complex research process, but above all so that he can repeat certain methods, use the results obtained in his research or overcome existing problems taught by someone's previous research, and of course to emphasized the importance of that research in the best possible way.

In this chapter, you will be introduced to the standards for writing a research paper through the chapters that the paper should have as well as their content.

MANDATORY DATA AND THEIR SCHEDULE IN RESEARCH WORK: STANDARDS

Front page

1

- Name of the institution
- Title of research paper
- Name and surname of the author (student; one or two), class, educational institution
- Name and surname of the mentor (one or two), title of mentor, educational and / or scientific institution where the mentor (or mentors) is employed
- Place, year

• Title of the paper

The title of the paper represents a confirmed or modified working formulation of the research task. It should be short, clear, precise, attractive and inventive. It is recommended that the maximum length of the title of the paper include 70 characters (letters and / or symbols).

2 Summary of work

The summary of the paper is a summary of its content.

The summary states:
Purpose and goal of research
Applied method of work (one method or more of them)
Achieved results, with a brief discussion of their importance and significance
Key conclusion (one or more of them)

As it aims to acquaint the global scientific public with the results that have been achieved, it is written in one of the world's languages, most often English.
The length of the abstract text should not exceed 250, nor should it be shorter than 150 words. The optimal length of the summary ranges from 200 to 250 words.

- **Key words**

Below the summary are the key words.
Usually up to 6 most important words are selected, which best represent the essence of the work with its associative properties. The selected words should be arranged in such a way that their meaning decreases from left to right.

3 Introduction

The introduction of the paper should include the field of research, data of other authors who have inspired the given research or are the subject of verification, as well as the goal of the research, ie the questions to which the research work seeks to provide answers. An important part of the introduction is an overview of previous papers on the same or similar topic. In this way, in fact, the idea for the current research work and the goal of the research are connected with the facts known until then, and the reader is effectively presented on what the given (current, new) work is specifically based on. In other words, the literature cited in the introduction should provide a clear picture of what was researched and / or explained (ie what was known) before the current research was made, and briefly indicate the issues that need to be researched.

Material and methods of work

4

This chapter of the research paper presents the processed material (all properties, its quantity, place and time of sampling / collection, etc. should be stated).

Also, the methodology of the work should be presented here, in order for the reader to get acquainted with the methods that the author (or authors) used in his research. This, in fact, means that all the details about the instruments used should be presented, as well as about the research procedures themselves so that other researchers can repeat them, if they decide to do the same.

Finally, it is necessary to define the probability of the statement and the area of measurement error (statistics - data processing).

5 Results and Discussion

The most important and at the same time the most demanding part of the research work consists in the interpretation of the obtained results. In the given chapter of the paper, we move from quantitative facts to the consideration and observation of relationships, making assessments and judgments, confirmation or rejection of a previously set hypothesis.

The interpretation of the results is usually textual, with very concise and precise assessments. It is important to separate the essential from the irrelevant and not to omit thinking about the stated facts.

When presenting the results, the reliability interval, ie measurement error (statistics) should be indicated.

In the part of this chapter that deals with the discussion of results, it should be pointed out whether the obtained results, as well as general considerations, coincide with previous results, considerations and / or views of other authors or this is not the case. If significant differences are observed, it should be clearly stated what they consist of, as well as the possible cause. The author (or authors) should certainly present results that negate the initial hypothesis, if such data have been obtained.

6 Conclusion

The author (or authors) confirms the (in) correctness of the applied methods, emphasizes the importance of the obtained results and indicates the possibility of further research in a specific area. The conclusion should be concise and precise. More precisely, it should not exceed one tenth of the scope of the entire research work.

7 Thank-you note

If the author deems it necessary, at the end of the paper he can list the names of the most deserving individuals who helped (contributed) to its realization.

8 Литература

The list of references includes the sources that the author (or authors) used in the preparation of the paper (books, chapters in books, studies, journals, collections of papers, etc.). The list of used literature is given in the order of appearance in the text of the paper, with the appropriate numbering. Special attention should be paid to the presentation of the used literature. It should, in fact, be uniform to allow the reader to easily find the original.

When the literary source is a book: ordinal number of the literature, initial of the name and surname of the first author, then initial of the name and surname of the second and other authors, title of the book, publisher, place of publication and year of publication.
For example:
[1.] C.N.R. RAV, Ultraviolet and Visible Spectroscopy, Butter works, London, 2 nd. ed., 1967

When citing a website as a source, cite it separately. Provide the exact link to the location from which you downloaded the content, not as the address of the home page.

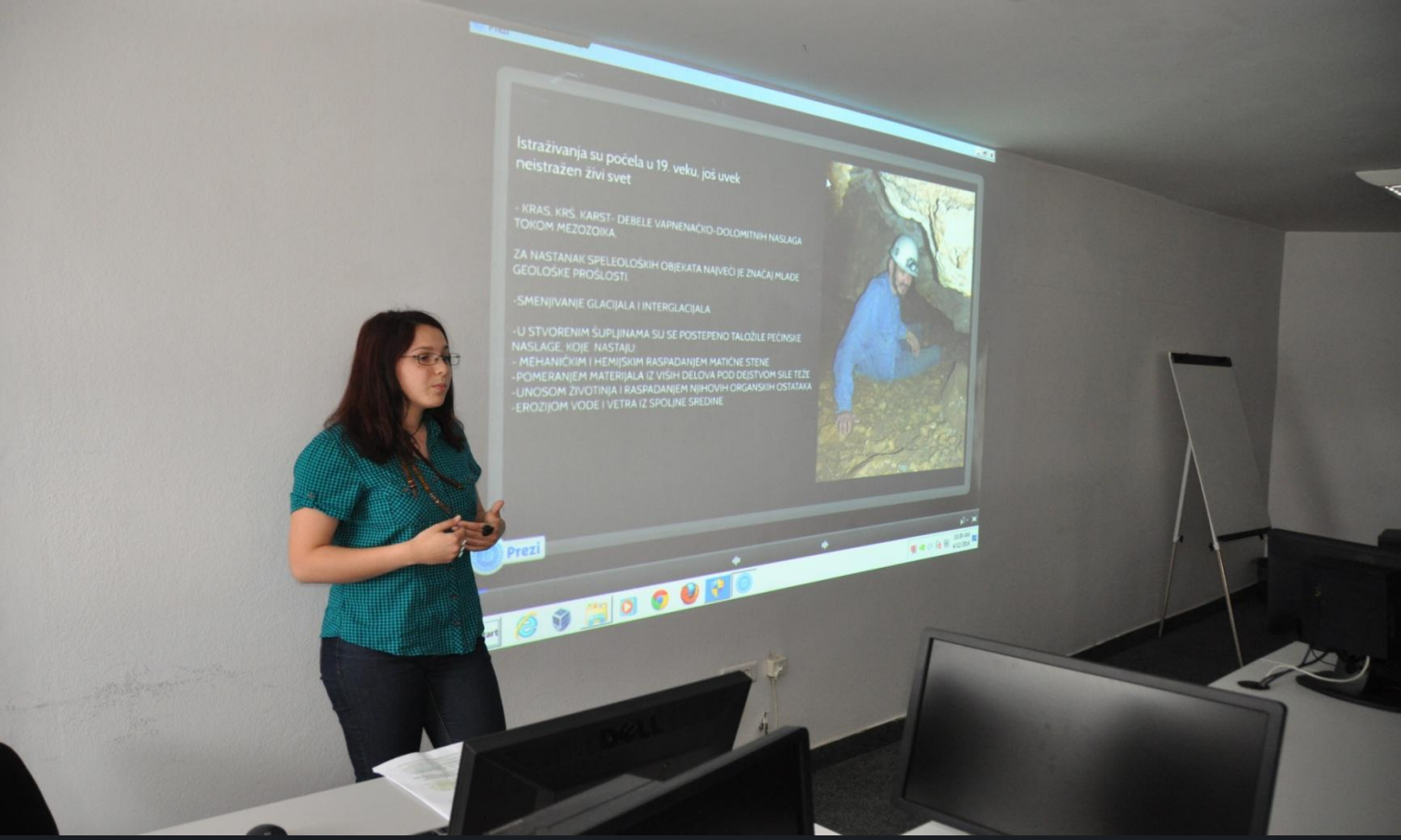
I C Y S S

Therefore, the research paper ICYSS 2020 should contain the following:

- Front page,
- summary,
- key words,
- introduction,
- material and methods,
- research results,
- conclusion,
- literature

The research paper cannot be larger than six A4 pages, which includes the title page.

The research paper is submitted in **PDF** format.



Example of presentation of research work with the help of presentation software

ICYSS

III WRITING INSTRUCTIONS ABSTRACT

Before starting to write a scientific research paper, please read the writing instructions first, in order to create a unique writing format for the competition of scientific research papers.

The abstract must be in .PDF format. The abstract must not exceed one A4 page and the size of the final abstract must not exceed 2MB.

The abstract itself contains key chapters from the research work only in abbreviated form, ie it contains only the most important information from each. This form of presentation of the paper is widely used in scientific circles because it allows a quick and concise overview of what is in the paper, which is extremely important when it is necessary to search dozens and dozens of papers for literature.

This chapter will present the structure of the abstract as well as the standards for its formatting.

Abstract structure :

1. Title of the paper, Name and surname of the author, class, educational institution. Name and surname of the mentor, title of mentor, educational and / or scientific institution where the mentor (or mentors) is employed.

2. Introduction

This part describes very briefly the topic that the paper deals with, the problem that is being solved and the idea of the research itself. It is very important to indicate in the introduction what is the purpose or goal of the research.

3. Method of work

This section describes what and how something was researched. It is desirable to accompany with pictures from the field, laboratory, workplace.

4. Research results

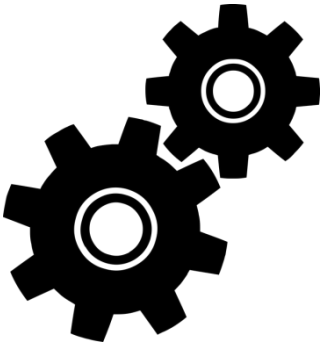
This section presents the results of the research, a brief discussion of the results. It would be best to accompany all this with individual charts and pictures. There may be subtitles. Explain in detail your contribution to science with your scientific research abstract.

5. Conclusion

The author confirms the correctness of the applied methods, emphasizes the importance of the obtained research results and points out the possibility of further research on the same problem. The conclusion should be concise, concise and precise.

6. Literature

Formatting standards:



Page formatting:

➢ The paper size must be standardized A4 (210 mm wide and 297 mm high). MS Word users can do this setting by clicking File, then PageLayout, then Paper Size. Units of measure should be converted to centimeters. To set this up, click on Tools, then on Options, and then on General.

➢ Do not number the page.
➢ All four margins (left, right, top and bottom) must be set to 1.5cm. This option is located in File -> PageLayout -> Margins.
➢ The text must be written in two columns 8.5 cm wide, with a distance of 1 cm between the two columns. Column width can only be excluded for equations, images, or graphs that exceed a given column width.
➢The entire abstract must be typed in Times New Roman font, the size of which is determined by Table 1.

Paragraph formatting:

The paragraph should be aligned from edge to edge (from margin to margin - Justify).
10 pt is the font size used.
A vertical space between two 4 pt paragraphs must be inserted.

Title, subtitle:

Both parts levels (Title, subtitle ... [Heading 1-2 style in MS Word]) must be aligned along the left edge (margin).
The vertical spacing before and after is given in Table 1

Pictures:

Images must be centered in a column (or page, if the size of the table requires its size). Also, the images must be accompanied by a numbered image with an explanation of that image. Images must be separated from the rest of the text - spacing 12 pt.

Figure 1 - Logo of

The numbering and explanation are separated from the picture by 4 pt and from the text that follows at 12 pt and are written in Italic style below the picture.

Table 1 - Paragraph formats

Paragraph style	Font size	The distance of two paragraphs		
		above	under	settlement
Title of the paper	14 pt	0 pt	12 pt	center
Author mentor	12pt	0 pt	0 pt	center
Mentor	10pt, italic	4 pt	0 pt	center
Title **Heading 1**	14 pt	21 pt	12 pt	left
Subtitle **Heading 2**	13 pt	12 pt	12 pt	left
Normal	10 pt	4 pt	0 pt	from edge to edge
Reference Heading	14 pt	21 pt	12 pt	left

Literature:

The list of literature is listed in the order of appearance of the author in the paper with the appropriate numbering, in Arabic numerals. Special attention should be paid to the presentation of the use of literature, which must be bibliographically complete, ie. the reader should be able to find the original without much difficulty.

When the literary source is a book: ordinal number of the literature, initial of the name and surname of the first author, then initial of the name and surname of the second and other authors, title of the book, publisher, place of publication and year of publication.
For example:
[1.] C.N.R. RAV, Ultraviolet and Visible Spectroscopy, Butter works, London, 2 nd. ed., 1967

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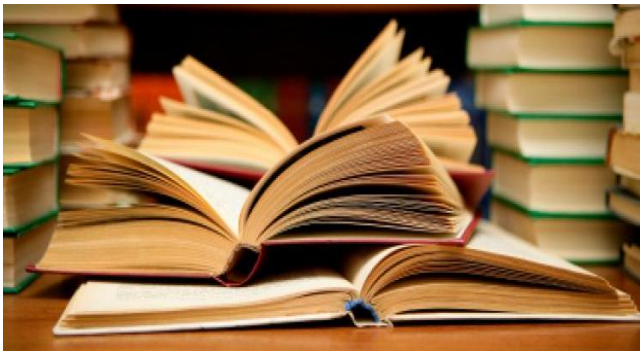

Abstract example:

... OH THAT I COME HOME AGAIN

How the First World War was experienced in Bela krajina families under Semiška gora

Author: Tjaša Ogulin, Srednja šola Črnomelj, Slovenija.
Mentor: Gordana Popovič Lozar, prof. and Janja Jankovič, prof.

1. Introduction

The research work focuses on geographically remote and economically poor part of Slovenia. The key question is "How the First World War was experienced by the Bela Krajina families (men, women and children) in the area of Semiška gora. Just before the war, in 1914, people mostly dealt with agriculture and there was no industry. Because of the large families and the agrarian overpopulation, people emigrated massively. During the war there were no fronts nearby, the inhabitants, like other citizens of the Austria-Hungary, felt her horrors in the rear area. The enlisted soldiers from this part of Austrian-Hungarian Empire were also fighting on different fronts. Traditional historiography is based on the testimonies of men who experienced the front, but less on the testimonies of women and children in the rear area. Memories of ordinary individuals have been preserved to a lesser extent than memories of important personalities.

2. Methods of Work

The research is primarily based on the study of historical sources. Different kinds of sources are used: first-hand, second hand, primary, secondary sources and reports.
Among the written sources, excerpts from historical testimonials or messages, like interviews, memories, letters, letters of death, postcards, school chronicle of Ljudska šola Semič, newspaper Dolenjske novice, school catalogues of Ljudska šole Semič, information from the Cultural Centre Semič, prevailed.
Among the visual resources, photographs of soldiers, statistical tables from the Special repertoire of places in Carniola for 1910 and an audio-visual image of personal testimony prevailed.
Primarily oral sources based on indirect witnesses of the participants of the war were used.

3. Research Results

In order to understand the situation of a family as a whole, the role of men, women, and children during war times were researched.
More than 300 soldiers from Semiška gora took part in the World War, more than of them 50 died. The soldiers bravely fought on individual battlefields. Least soldiers fought on the Balkans and the Thessaloniki fronts, and most of them on Italian-Austrian or Isonzo Front. Everyone, except one, fought on the Austro-Hungarian side. Sometimes more men from the same family participated. Both younger and older men were drafted, capable men, and sometimes-even men who were not physically and mentally able to fight.
Because of emigration to America, women from Bela krajina were used to living without men. However, their departure to war was harder because of constant fear and anxiety. Women took care of children, elderly parents and other family members, did field work, ran the farms, were actively involved in societies and organized gathering campaigns and events to help men on the front lines. They collected food, wool, and metals for the needs of the army. Through letters and postcards women maintained emotional ties with men. It was difficult because they were young and inexperienced.
The children were the most affected victims of the war. They lost childhood, the safety provided by the father and the mother, were mostly left to themselves, taking care of younger siblings, working on the farm, overtaking the roles of adults. The state mobilized the children through the school system: the lessons began later; the children were often absent due to field tasks. The girls knitted gloves, socks and caps at school, and the boys picked up various metals for the army's need. In addition to collecting campaigns, charity events were also organized, which had solidary and patriotic significance, where the children also socialized.

4. Conclusion

The value of my research is in the fact that I paid particular attention to women and children, so groups that are often overlooked in the society, which was confirmed once again by the research. I recognized the important role that they played in the rear area of battle lines in the area often forgotten by rest of Slovenia. The main value of my research is in the collected and written material. I believe that I have prevented forgetting an important part of our past. Knowing family life in the past is also important for a better understanding of today's family relationships. In this way, we remain connected with our ancestors; we can understand ourselves better, the family and the world around us. Future generations could build a better world on previous experiences.

5. Literature

I. Zgodovinski arhiv Ljubljana, Enota za Dolenjsko in Belo krajino Novo mesto, Osnovna šola Semič.
II. Konda, Alojzij, Življenje pod Semiško goro, Občina Semič, Semič 2007.
III. Dolenjske novice, letnik XXXII, XXXIII, XXXIV.