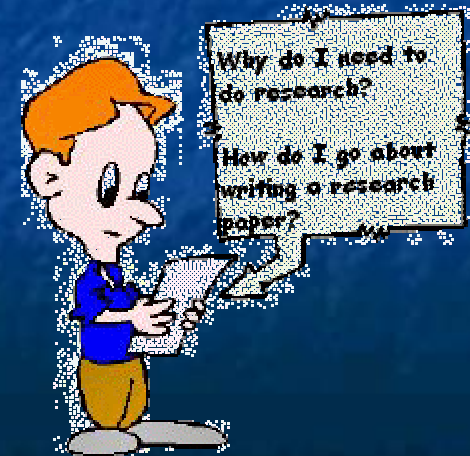


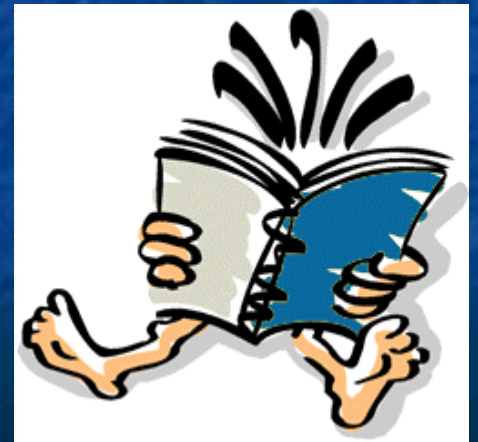
How and why to write a Research paper

Prof. A-El-Ansary
Biochemistry Departement
King Saud University



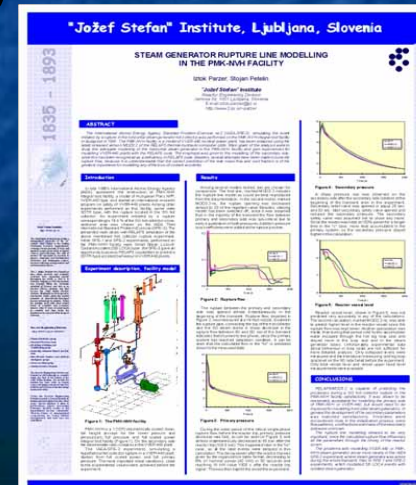
Research

- Answers **NEW** questions about a **TOPIC**



Producing a scientific paper

- Scientific papers are the means by which research findings are communicated to others.
- It is important to understand the process whereby a paper comes into being.



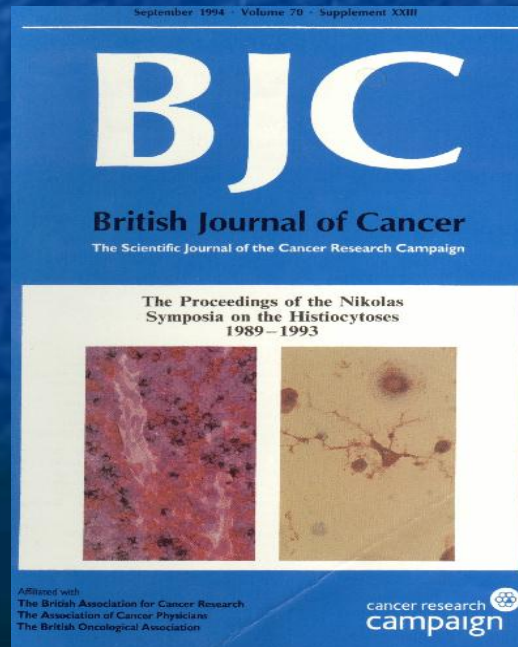
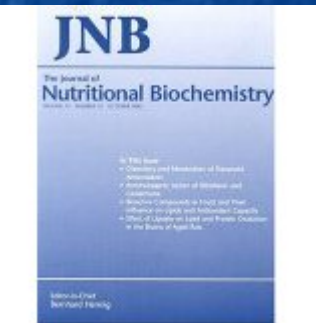
Why you should write a research paper?

-To consolidate your research



To Publish in a journal

- You must read the instructions to author of the journal which you have selected to publish your paper.



To submit to a conference



To do homework



What If I don't Know how?

- Take the advantage of:
- Writing resources available via books, papers and internet.
- Participate in small group writing sessions
- Ask any one who know
- Follow me

What is the research paper?

- Analyse a topic or issue.
- Take an argumentative approach to support your stand on the issue.
- Presents your original view (data) on the issue.

Pick a topic

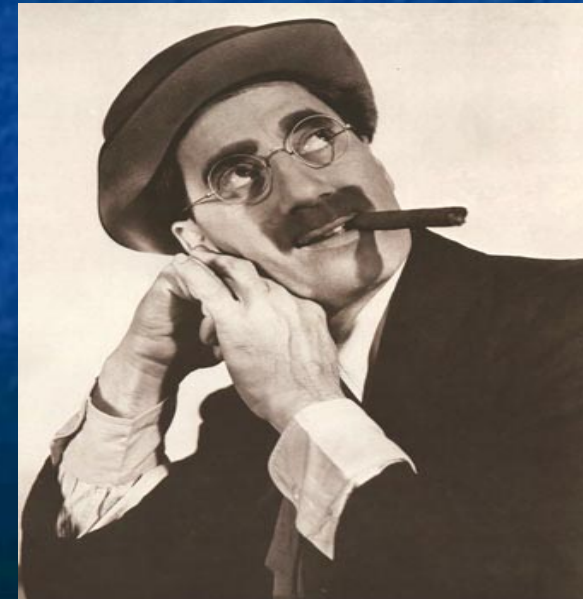
Your topic should be

- Something that interests you.
- Something you know about it.
- Something you feel strongly about it.
- Your professor assigned.

Correct

It is better that:

Your topic be something that interests you



Define a topic

- Basic searching to check if there is enough material.
- make sure the topic is not too broad
- Does the topic meet the approval of your professor/ group/ yourself.

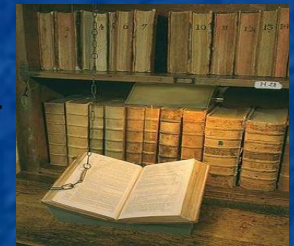
Why to define your topic before you start?

- It can help to organize thoughts.
- It can avoid frustration.
- It can help use time effectively

Types of sources

Primary source

The original text of something, first-hand information EX. A book written by one who experienced.



Secondary Source

A work that presents information along with the opinions and ideas of the authors about the primary source (less reliable)



What to discard?

Discard any sources that do not meet academic criteria.

- Currency
- Accuracy
- Authority
- Coverage



Source? Bibliography cards

Include:

- Author's name
- Title of the article
- Title of book or periodical
- Edition or volume (underlined/italic)
- Date of publication
- Publishing company
- Page number



Example

Call #

B (reference code)

Everett, William (author's last name, first name)

"Life on the Frontier." (title of article)

Americana (title of the magazine)

Volume 34 Issue 4 (not contained with newspapers)

September 1970 (date of publication)

pp. 65-78 (page numbers)

A book reference

973.7 Tin (call number)

A (reference code)

Tindall, George B. (author's last name, first name)

The Emergence of the New South (title of the book)

Baton Rouge: Louisiana State University Press, 1967 (place of publication, publisher and date of publication).

Internet source cards

Include:

- Title of the website (underlined).
- Authors name
- Copyright date
- Article title (in quotation marks).
- Web address
- Date you obtained the information.

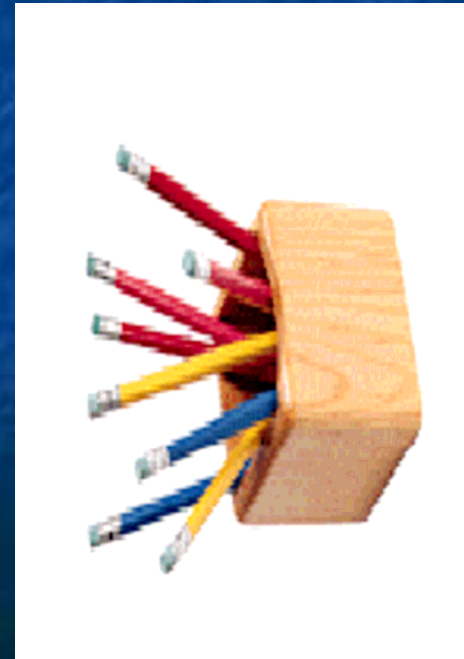


Some points concerning references

- Cite ideas or information from other sources
 - In the body of the text
 - In the references section.
- Citation should be in a standard form.
- Don't copy citations, read the original paper for yourself.

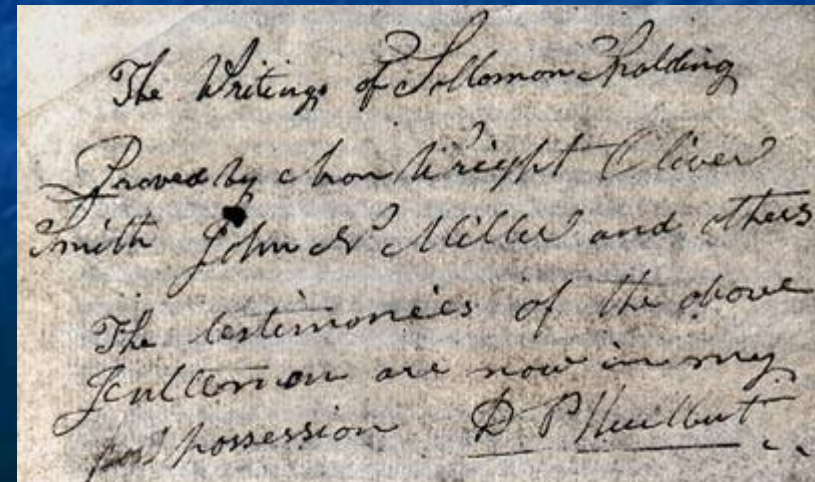
Writing Process

- Stating thesis (listing ideas).
- Collection of information
- Organization
- Drafting
- Revising
- Proofreading



Drafting

- Evaluate and organize ideas.
- Select relevant notes.
- Give yourself enough time to write your research.
- Avoid distractions.



The Writings of Solomon Holding
Proved by a bonfire receipt Oliver
Smith John & Miller and others
The testimonies of the above
gentlemen are now in my
possession D. P. Heilbut

Organize your paper

- **An OUTLINE**

Put the paper in a logical order.

- Group your note cards according to topic headings.

Outline organization

An outline can be organized in two ways:

- Deduction – a process of development that moves from the general to the specific.
- Chronological order- a process that follows a plot or topic with a traditional time line (good for history papers).

Once You've completed your rough draft.....

- Reread your rough draft
- Look for and change:
 - Areas of your paper that don't flow or are hard to understand.
 - Grammatical errors
 - Spelling errors.

Now you are ready to make your final draft.

The possible structure of your paper

- Title
- The name of author(s)
It would be better that you put these two items on a single page called "title page."
- Abstract (+keywords)
(2500 character max) single spacing
- Introduction
- Literature Review
- Methodology and Materials
- Results
- Discussion
(All 10 pages maximum)
- Summary and conclusion.

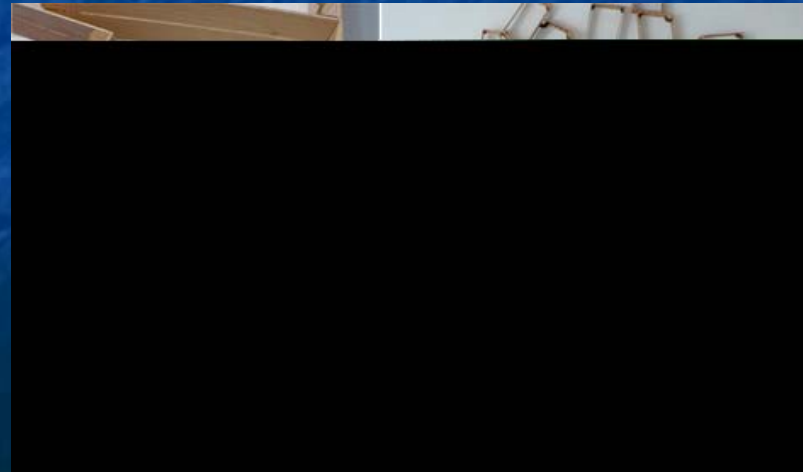
The possible structure of your paper 2

- Acknowledgement
- References (According to the standard format).
- Figure and tables

**The ten pages does not include the references, figures and tables.

Abstract

- Short & Concise.
- Summmerize your project.
- Not longer than 1 page.
- Include all the keywords in your study.



The Abstract

The abstract is a brief summary of your research, no more than 2500 characters.

It should include all the following:

- Background & significance
- Material and methods.
- Results-What happened?
- Discussion and
- conclusions.

Why did it happen that way?

* No citation

Common problems with abstract

- Too long
- Too much detail
- Too short
- Failure to include important information

Introduction

- Introduce the study by giving background.
- Present the research problem.
- Present “how” and “why” this problem will be solved.
- Why the study is being done (**Significance**).

Template for an introduction

- **Step I: Establish the study area by:**
 - Explain why this area is important. *and/or*
 - Moving from general to specific. *and/or*
 - Reviewing relevant items of previous research.

Template for an introduction (continued)

- Step II: Define a research problem (Question) by:
 - indicate a gap in the previous studies.
 - or
 - rais a question or continue a previously developed line of inquiry.
 - or
 - Counter claiming (Disagree with an existing accepted approach.

Template for an introduction (continued)

- **Step III: Propose a solution by:**
 - Set objectives *and/or*
 - Indicate the structure of the study.

Material and Methods

- Describe the research, the experimental and the equipment used.
- It is acceptable to reference a little known technical procedures.
- Do not describe well-known techniques.

Example NMR





Results

- Do describe the results of the research as figure one shows, axon length increases in the presence of higher concentration of NGF,
- DO NOT INTERPRET THE DATA
 - “Increased axon lengths shown in figure one indicate that NGF is an important factor in neuronal growth.”
- Results section describes in words what is shown graphically in tables and figures.





Discussion

- Analysis of results.
- Discuss results in order they were presented.
- Comparisons to similar studies.
 - Are results consistent with, differ from or improve upon another study.
 - Remember to cite the original study.
- Troubleshooting:
Address questions or possible discrepancies that rais about your research.



Conclusions

- Indicate why you reached that conclusion.
Refer to the results that help you reach your conclusions.
- What is the most significant finding.
- Mention possible ideas for future research



Acknowledgement

- Identify where and when the research was done.
- Acknowledge those who provided major assistance to you.
- Thank the Institute for creating, funding and organizing the program.
- If applicable, thank any other person or institute who has helped you.



References and Bibliography

- Last name, first name (year of publication): *Title italicized or underlined* (City:Publisher,year).
- Elliott, Alfred and Ray, Charles: *Biology* (N.Y): Appleton- Century Crofts,1990).

- Here is an example of three hypothetical works by the same author.
- El-Ansary A. (2009) : “Metabolic integration in schistosome parasite”. (King Saud University Press) (2nd edn 2010).
- (2009) “Stage specific expression of schistosome proteins.”(King Saud University Press) (3rd edition).

- Al-Daihan S. and El-Ansary A. (2007) Aspects of Schistosome - Biomphalaria snail interactions as target for drug design. *Med. Sci. Monitor*, 15(3): 123-138.
- Warsy A. and El Hazmi M. (2005) Genetic aspects of glucose – 6 - P dehydrogenase deficiency in Saudi population. *Saudi Medical Journal*, 23(6): 118-124.

Formating the page

- Use 1 inch margins
- Use Times New Roman or a similar font with 12-point type.
- Double spacing.
- Indent each paragraph.
- Number the pages.

Title page

- Title of research
- Name of author(s)
- Name of author(s) institute e.g King Saud University
- Department (Biochemistry Dept.)
- Location (KSA Riyadh)
- Address
- E-mail

THE END

Now start to do your homework