



Sungkyunkwan University Natural Sciences Campus

Research Writing Workshop

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Academic Trainer, Editage

About Me

- Assistant Professor, Chosun University, Department of Political Science and Diplomacy
- PhD Candidate in International Relations from Korea University's Graduate School of International Studies
- 10 years experience teaching English as a Second Language (ESL) and teaching social sciences and humanities using English as a medium of instruction
- Former *English Connection* Associate Editor
- Over 70 hours of workshops and seminars with Editage
- Strong desire to help ESL academics publish in high level international journals

editage



How to write a manuscript for journal publication.

HOC and LOC

Higher Order Concerns

- Focus
- Audience
- Purpose
- Organization
- Development

Lower Order Concerns

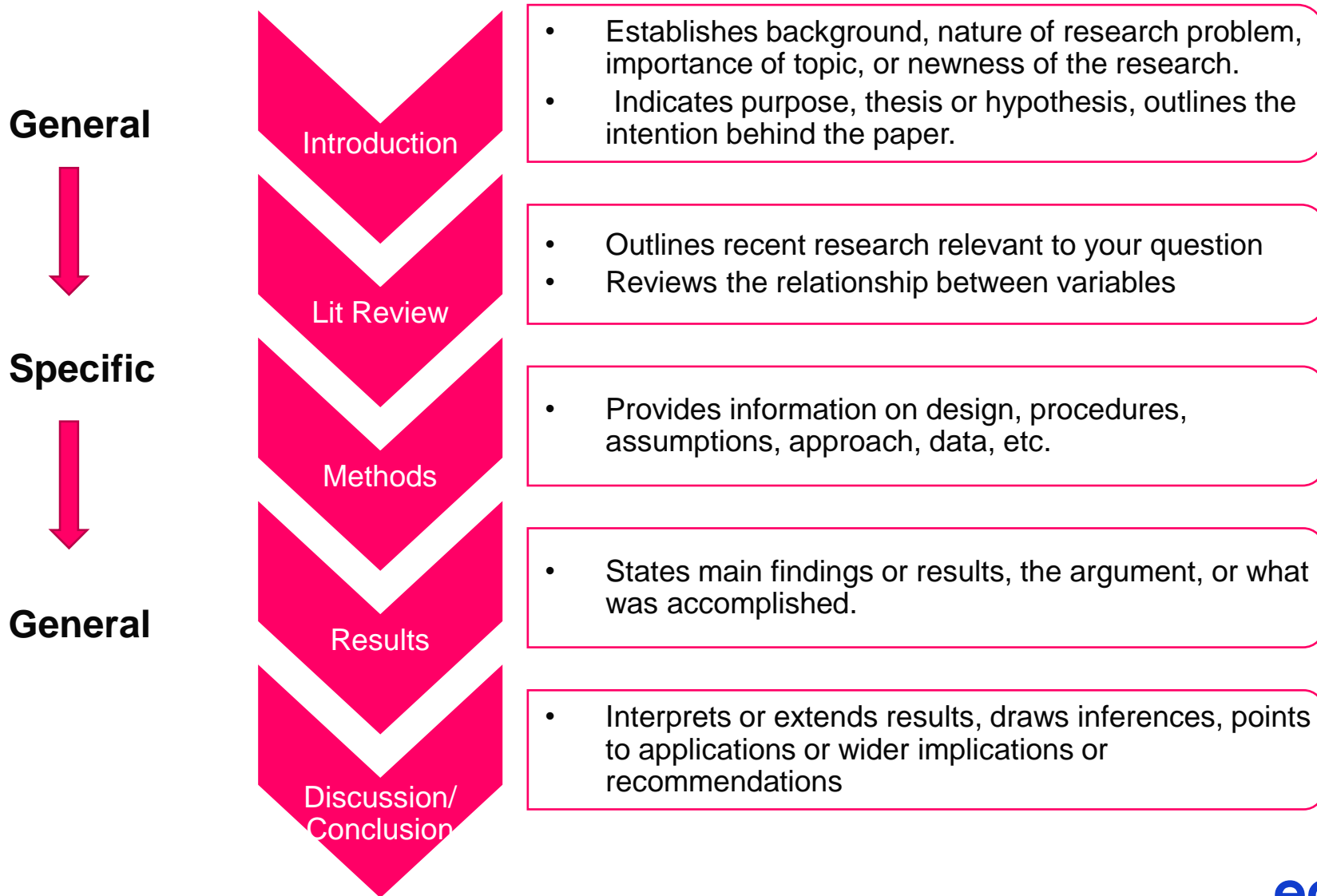
- Language
- Spelling
- Word Choice
- Punctuation
- Sentence structure
(in larger writing)

Basic structure of a research paper

- Title
- Abstract
- Keywords
- Introduction
- Literature Review (maybe)
- Methods
- Results (Findings)
- Discussion
- Conclusion (maybe)

****Of course, every research paper is different and has different purposes. Some of the sections may not be needed; some different sections may be added. You must personalize to fit your needs.**

Structure



First things first... Write an outline!

- No rule for which outline approach is best
- Although the format of an outline is rigid, it shouldn't make you inflexible about how to write your paper
- If appropriate, organize the main points of your outline in chronological order.
- For a standard research paper of 15-20 pages, your outline should be no more than four pages in length.



Title



Basic tips for writing titles:

- Drop article (a/an/the) if it is the first word of the title
- Avoid expressions such as 'an investigation of' or 'research on'

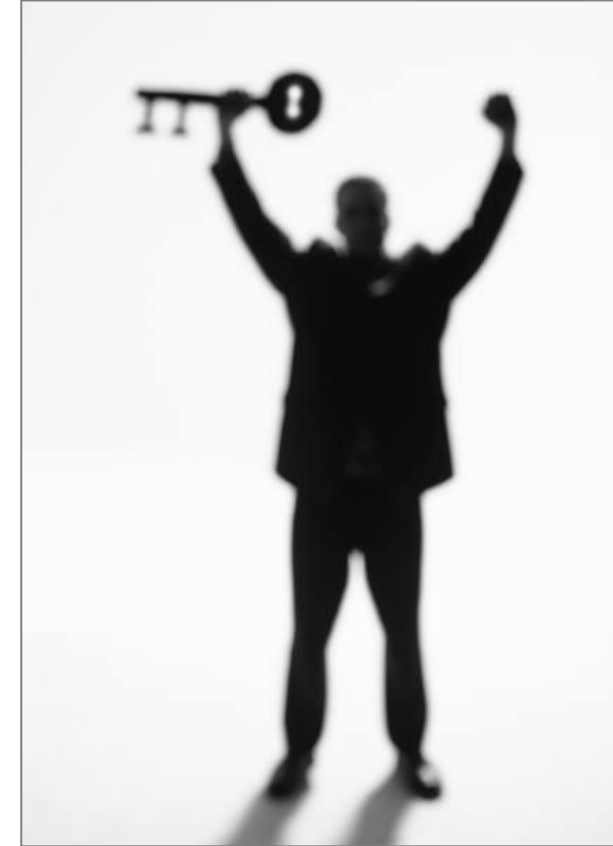
Basic rules for formatting a title:

- Title should not be a complete sentence
- Capitalize all words (except function words)
 - But check your Journal's requirements!

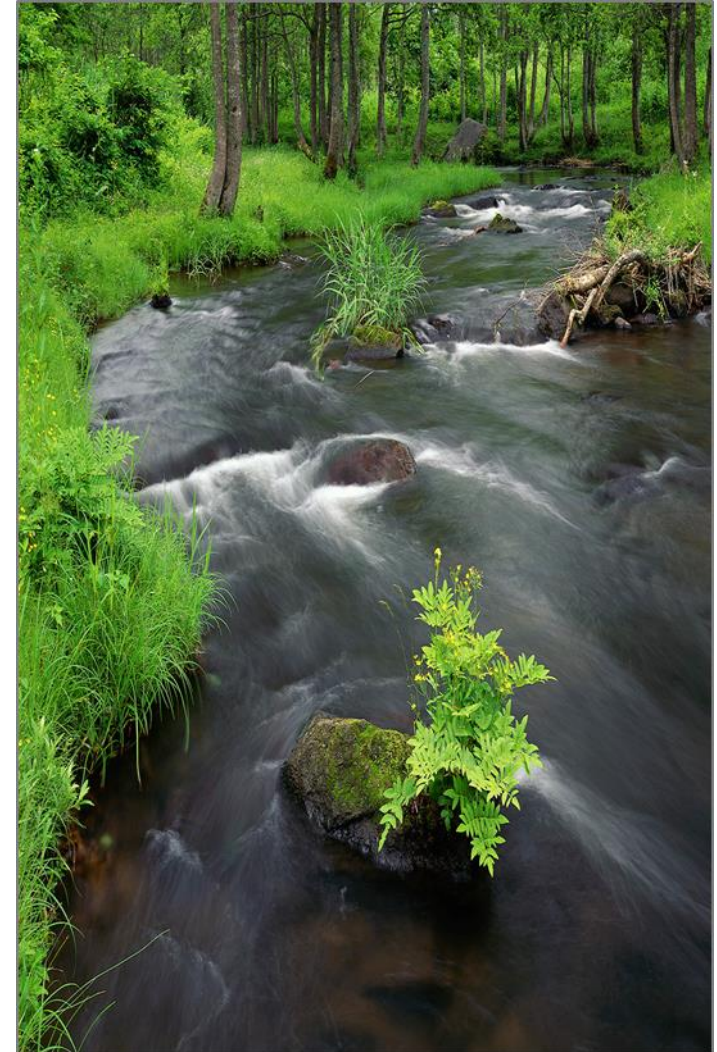
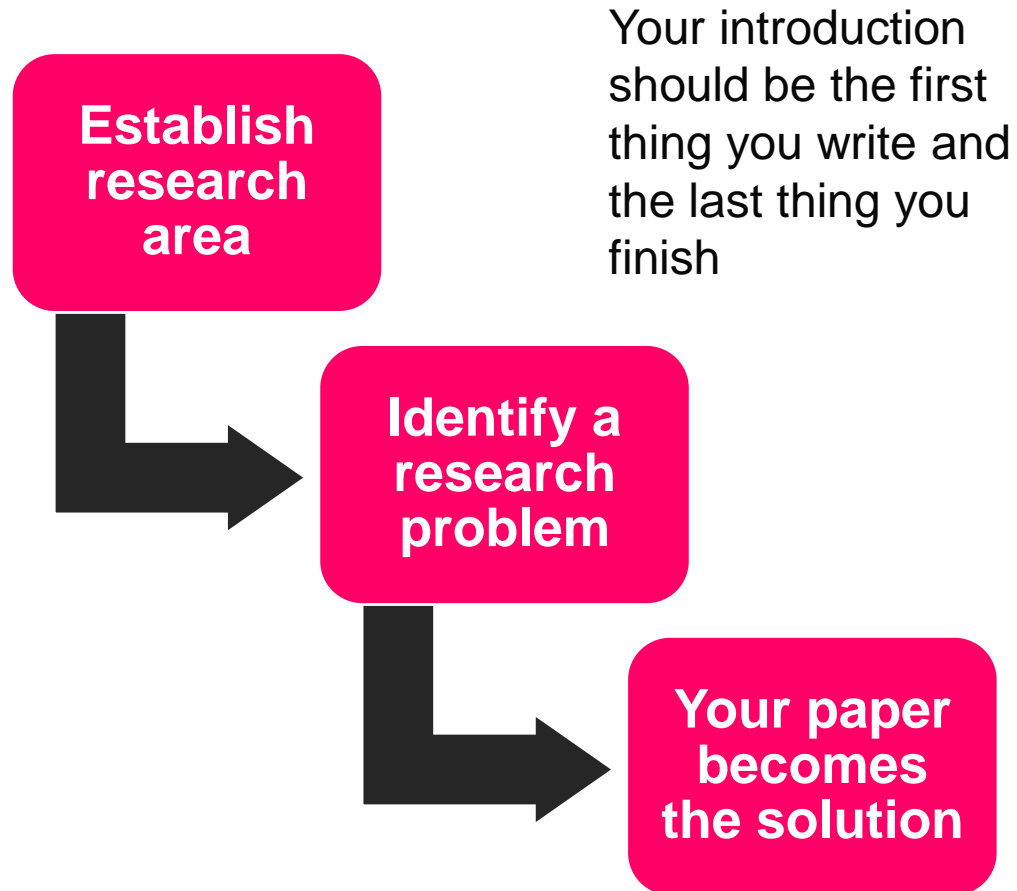
Keywords

Choosing Keywords

- Choose only relevant words from title
- Obey the word limit: Usually between 3 and 10 words
 - Have 4-5 ready to go
- Phrases can help refine your topic
- Choose the most important nouns
- Use different variants
- Keywords help your article be found by other researchers



Introduction



General phrases in an Introduction

1. Establish an area to research by:

- Highlighting the importance of the topic, and/or
- Making general statements about the topic, and/or
- Presenting an brief overview on current research on the subject, and/or
- Defining key terms.

2. Identify a research niche by:

- Opposing an existing assumption, and/or
- Revealing a gap in existing research, and/or
- Formulating a research question or problem, and/or
- Continuing a disciplinary tradition.

3. Place your research within the research niche by:

- Stating the intent of your study,
- Outlining the key characteristics/differences of your study, and/or
- Introducing basic methodology used, and/or
- Describing important results, and/or
- Giving a brief overview of the structure of the paper.

Introduction

Context

The problem you are addressing

Broad question or issue with some context

Your position / thesis statement

Your answer to the problem

Main points

*Overview of
argument*

Note: Thesis statement
may come at end of the
introduction

Verb tenses in Introductions

Present tense: A fact or a practice that is generally accepted in the field.

Past tense: Results of individual experimental papers. Finished events in the past with a specific time.

Present perfect tense: (have + PP) Summary of generalization about research in the field or general trends in society. No specific time or date.

Present continuous/passive tense: An ongoing situation that is currently developing (... is being developed, etc.)

Step 1: Establish the research area

The cumulative effects of environment pollution on climate change and ecological deterioration **are growing** prominent.

The delta function **has played** an enormous role in the development and advancement of quantum mechanics **since** its introduction by Dirac [1].

General statements are key here.

Step 2: Identify the research problem

Many Chinese researchers **have studied** the EKC hypothesis with time series data (Zhang, 1999; Zhao, 2005; Song et al., 2007; Chen et al., 2009; Peng, 2006; Ling et al., 2001). Their findings **are inconclusive and sometimes contradictory**.

However, the evaluation of the coefficient B (often called U_0 in literature) **is not obvious** and **has been** the **subject of some disagreement** [8–11].

This is the 'however' statement.

Step 3: Your paper becomes the solution

Our purpose in this paper is to present a unified picture of how by letting the range of the square well approach zero in one, two, and three dimensions, one **may deduce** the bound-state structure in the delta function limit.

In order to explore the interactions and feedback between environment quality and economic growth and measure the time lag between them, **this paper builds** several models on the basis of time series data analyses and **carries out** a comprehensive study of the relationship between industrial pollution and economic factors.

Other key phrases include 'here' or 'in this study'.

Keys to a good Introduction

Your introduction should clearly identify the subject area of interest

Establish context by providing a brief and balanced review of the pertinent published literature

Clearly state the hypothesis that you investigated

Why did you choose this kind of research study or design?

Explain how this paper solves the research question



Literature Review

- This is an expanded discussion of what the discipline (your audience) already knows.
- This may include more developed discussions of definitions, histories, and/or theories.
- It may also make connections between similar research and display any contradictions that you found.
- It establishes for your reader that you understand the topic and that your contribution is valuable.
- The object of this portion of the paper is to explain the research thoroughly enough to allow your audience to understand the material without having to do any additional reading.

Types of Literature Review

Argumentative Review

Examines literature selectively in order to support or refute an argument, deeply imbedded assumption, or philosophical problem already established in the literature.

Integrative Review

Considered a form of research that reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated.

Historical Review

Historical reviews are focused on examining research throughout a period of time.

Methodological Review

Provides a framework of understanding at different levels and helps highlight many ethical issues which we should be aware of and consider as we go through our study.

Systematic Review

Consists of an overview of existing evidence pertinent to a clearly formulated research question to identify and critically appraise relevant research, and to collect, report, and analyze data from the studies that are included in the review.

Theoretical Review

Concretely examine the corpus of theory that has accumulated in regard to an issue, concept, theory, phenomena.

Writing the Literature Review

Use Evidence

A literature review is just like any other academic research paper.

Be Selective

Select only most important points to highlight in the review.

Use Quotes Sparingly

Do not use extensive quotes as a substitute for your own summary and interpretation of the literature.

Summarize and Synthesize

Remember to summarize and synthesize your sources within each paragraph as well as throughout the review.

Keep Your Own Voice

The writer's voice should remain clear.

Use Caution When Paraphrasing

Be sure to represent the author's information or opinions accurately and in your own words.

| | |
|---|--|
| Title | |
| Author | |
| Year | |
| The purpose of the study is... (one sentence, your own words) | |
| Subjects/ Participants | |
| Type of Study | |
| Measurement Instruments | |
| Observation | |
| Interview or Survey | |
| Academic Performance Measure | |
| Intervention(s) | |
| Outcomes/Results | |
| Critique Comments | |
| Relevance to your Study | |
| Other Comments | |

| | |
|---|---|
| Title | The effects of repetition and L1 lexicalization on incidental vocabulary acquisition by Iranian EFL learners. |
| Author | Mohammad Ali Heidari-Shahreza and Monasoor Tavakoli |
| Year | 2012 |
| The purpose of the study is... (one sentence, your own words) | The purpose of this study was to investigate how repetition and L1 lexicalization contributed to L2 incidental vocabulary acquisition. |
| Subjects/ Participants | Ninety Persian speaking first year Iranian university students where were deemed (by test) to be intermediate English speakers. |
| Type of Study | Experimental research study |
| Measurement Instruments | |
| Observation | None |
| Interview or Survey | None |
| Academic Performance Measure | Pre-test was done mainly to ensure a median equality amongst the participants. Post-tests and delayed post-tests were administered. The tests measured receptive and productive knowledge of orthography, grammar, and semantics. |
| Intervention(s) | The students were split into three groups. Group one had one repetition of the target words in the reading. Group two had three repetitions and group three had seven repetitions. |
| Outcomes/Results | There was significance of vocabulary retention between levels of repetition was high in all aspects of vocabulary knowledge. While the retention was slightly lower on the delayed test, the significance remained. Regarding lexicalization, there were significant differences in tests of vocabulary semantics but no significant difference orthographic or grammatical knowledge. |
| Critique Comments | The experiment showed that repetition can help learners develop different aspects of vocabulary knowledge. However, this study is very narrow in that it includes only first year university students who were all at a specific level. The sample size was also quite small. |
| Relevance to your Purpose | This article will help show that repetition is very helpful in helping ELLs learn English vocabulary. |
| Other Comments | |

| | |
|---|---|
| Title | |
| Author(s) | |
| Year | |
| Publication | |
| The purpose of the study is... (one sentence, your own words) | |
| Type of Study (Choose) | <ul style="list-style-type: none"> • Descriptive (e.g., case-study, naturalistic observation, Survey) • Correlational (e.g., case-control study, observational study) • Semi-experimental (e.g., field experiment, quasi-experiment) • Experimental (Experiment with random assignment) • Review (Literature review, Systematic review) • Meta-analytic (Meta-analysis) |
| Methodology (Choose) | <ul style="list-style-type: none"> • Qualitative • Quantitative • Formal • Advocative/participatory • Pragmatic |
| Research design | |
| Outcomes/Results | |
| Implications/ Recommendations | |
| Critique Comments | |
| Relevance to your Study | |
| Other Comments | |

Getting Organized

- Of course, use the electronic resources available to you:
 - EndNote
 - RefWorks
 - Zotero
 - Mendeley
- Your school library may give you free access to one or more of those tools (and some are free online)

Literature Review Organization

It is up to you on how you organize your lit review. Do what makes sense to you and your topic, but also consider the logic and readability.



Structure of Literature Review

Potential ways to structure your review:

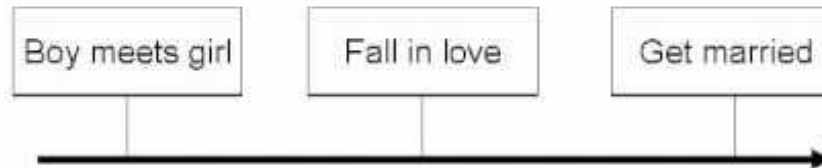
Chronological

Chronological

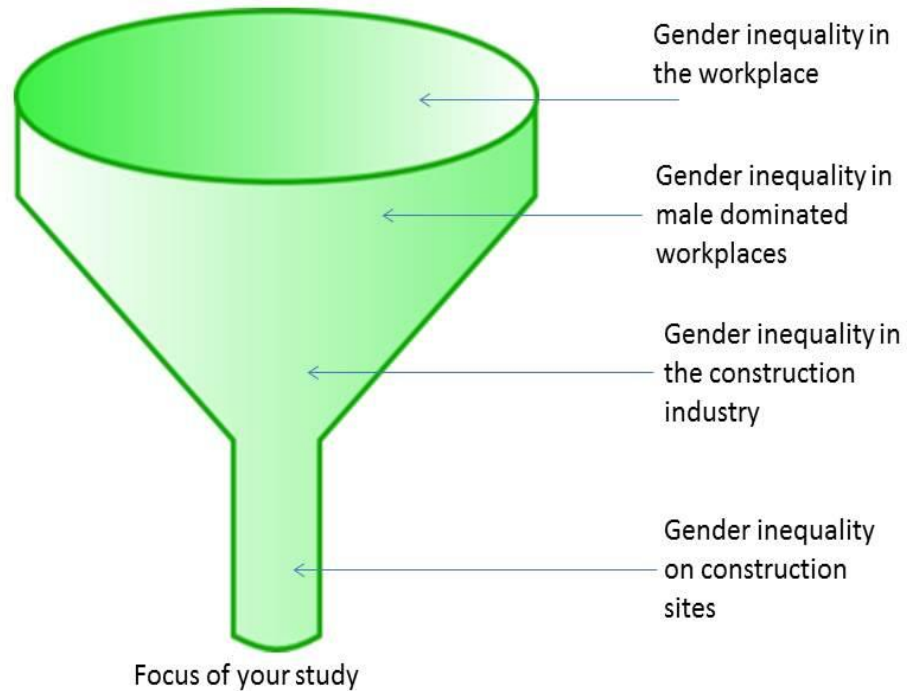
In order of time

Chrono = time

Stories are told **chronologically**



Structure of Literature Review



Thematic
(sometimes
called funnel)

Structure of Methods section

- Reader needs to understand experimental procedures
- Briefly mention common procedures
- Include enough detail so readers can understand how experiments were done
- Also include a description of statistical methods employed in the study
- Provide a detailed version of procedures Supplemental Data (as needed)
- Who approved the study (as needed)
- Statement of the funding source and Institutional Review Board (IRB) guidelines followed (as needed)



Structure of Methods section

| Variation in Methods Sections | |
|---|---|
| Condensed | Extended |
| Tends to describe familiar, standard methods | Tends to describe new or unusual methods |
| No named subsections | Provides background information |
| Uses abbreviations and citations as shorthand | Uses longer descriptions |
| Running series of verbs (e.g. “collected, stained and stored”) | Usually one finite (main) verb per clause |
| Few “by + verb-ing” statements (explaining “how”) | Several “how” statements |
| Few definitions and examples | Few definitions and examples |
| Few justifications (explaining “why”) | Several justifications (“in order to ...”) |
| Few linking phrases | Wide range of linking phrases |

Adapted from Swales JM, Feak CB. Academic Writing for Graduate Students, 2nd ed. Ann Arbor: U of Michigan; 2004.

Use Active Voice in Methods Section

Form of the active and passive voice

Active voice puts the person or thing doing the action in the subject (“power”) position.

Examples:

1. The researchers obtained the Thomas result variationally as an upper bound.

The passive voice changes the word order.

The object (Thomas result) becomes the subject.

2. The Thomas result was obtained variationally as an upper bound by the researchers.
3. The Thomas result was obtained variationally as an upper bound.

Mentioning the actor (researchers) becomes optional.

Choose the correct verb

1. Therefore, the methodology of the generalized impulse response function **developed / was developed** in order to carry out meaningful analyses on VAR models.
2. To investigate the role of oligomers in NM amyloid formation and growth, the researchers **explored / were explored** the relationship between monomer concentration and polymerization progress.

Expressions of Time/Sequence

1. **Then/Next** , we gave the post test.
 2. We **then/next** gave the post test.
-
1. **Also**, idiosyncrasies in the history of a population can determine political allegiance.
 2. Idiosyncrasies in the history of a population can **also** determine political allegiance.
 3. The **next step** in our analysis involves estimating the VAR models mentioned above.
 4. **After conducting** the full array of partial F-tests for the three equations...

Results section

- These are the answers that your research produced.
- This is not a presentation of raw data, but a presentation of the numbers or facts determined from the analysis.
- If you are using a hypothesis, this is where you state whether you accept or reject that hypothesis.
- Properly formatted tables and charts can make this a very short but very effective section.
- It is not always necessary to repeat in paragraphs what you show in a chart. Text should lead the reader to the chart or table, not repeat what can already be seen.

Title-brief, informative &effective

Experimental design and aim

Major findings

Interpretation of your findings

Point to your figures and tables!!

All TSP Isoforms Induce Synapse Formation

There are five TSP isoforms in mammals, which fall into two groups according to their domain structure and oligomerization states (Figure 1A). Trimeric subgroup A TSPs, TSP1 and 2, are synaptogenic (Christopherson et al., 2005). **To determine whether pentameric subgroup B TSPs are also synaptogenic, we cultured RGCs in the presence of astrocytes or with TSP 1, 3, 4, or 5. All subgroup B TSPs increased synapse number significantly to similar levels as TSP1 or astrocytes (Figures 1B–1D). These results suggest** that the synaptogenic domain of TSP is located in the conserved C-terminal portion of TSP, which is common to all isoforms spanning the EGF-like repeats, the calcium-binding repeats, and C-terminal L-type lectin-like globular domain.

Gabapentin Receptor $\alpha 2\delta$ -1 Is a Neuronal Thrombospondin Receptor Responsible for Excitatory CNS Synaptogenesis

Gagla Eroglu,^{1,2,*} Nicola J. Allen,² Michael W. Susman,² Nancy A. O'Rourke,² Chan Young Park,² Engin Özkan,^{3,4} Chandrani Chakraborty,² Sam B. Mullinyawe,² Douglas S. Annis,⁵ Andrew D. Huberman,² Eric M. Green,² Jack Lawler,⁶ Ricardo Dolmetsch,² K. Christopher Garcia,^{3,4} Stephen J. Smith,² Z. David Luo,^{6,7} Arnon Rosenthal,⁸ Deane F. Mosher,⁹ and Ben A. Barnes²
¹Duke University Medical Center, Cell Biology Department, Durham, NC 27710, USA

Location Statements

Indicative (passive and active)

- Figure 2 illustrates the conflict resolution of the previous service based on the proposed conflict management method.
- This overall decay can be further decomposed into ..., as shown in Fig. 2.

Informative (active)

- This effect is most clear in Fig. 3B, where
- Fig. 3B clearly shows that the b_o values increase as

Informative (using ‘()’)

- Having dried in a vacuum oven at 80 °C for 24 h, complete CNT sheets (Figure 1) were obtained.

Example Statements

In the adjusted multivariable model, several of these associations persisted (Tables 2 and 3). Teaching hospitals had higher CIT scores (4.6 points higher, $p = 0.002$) than nonteaching hospitals.

We found no relationship between the normalized IT expenditure variables and CITAT scores, **indicating that** positive associations in the original analysis (in particular, higher automation scores associated with higher IT expenditures) **diminished** after accounting for bed size.

Discussion section

Explanation of results: comment on whether or not the results were expected and present explanations for the results; go into greater depth when explaining findings that were unexpected or especially profound

References to previous research: compare your results with the findings from other studies, or use the studies to support a claim

Deduction: a claim for how the results can be applied more generally

Hypothesis: a more general claim or possible conclusion arising from the results [which may be proved or disproved in subsequent research]

Problems to avoid in discussion section

- Do not waste entire sentences restating your results
- Do not repeat your recommendations for further research in both the discussion and conclusion sections
- Do not introduce new results in the discussion
- Use of the first person is acceptable, but too much use of the first person may actually distract the reader from the main points

Showing certainty about results

Basic claim: An increase in smoking among teenagers **caused** long-term health problems.

Stronger claim: **Based on these results**, it has become clear that an increase in teen smoking **must have caused** long-term health problems.

Limited claim: **We have reason to believe that** the increase in teen **smoking may have been one source** of long-term health problems in adults.



Our results explicitly indicate that the transition from metallic to molecular behaviour in gold nanoparticles occurs between Au₃₃₃ and Au₁₄₄ (that is, 2.3–1.7 nm; Fig. 6). Au_{~520} and Au_{~940} behave like metal, while Au₁₄₄ and smaller particles exhibit molecular-like behaviour. The Au₃₃₃ size exhibits both metallic and molecular behaviour. Based on the optical properties and electron dynamics, gold nanoparticles can be classified into three states: metallic (larger than 2.3 nm), transition regime (between 2.3 and 1.7 nm) and non-metallic (smaller than 1.7 nm). The transition apparently impacts the catalytic properties, as demonstrated in both CO oxidation and electrocatalytic oxidation of alcohol. The determination of the evolution from metallic to molecular gold nanoparticles will open up future exciting opportunities for not only understanding the origin of SPR but also revealing the new properties of metallic nanoparticles in the transition regime.

← Describe what your results mean in context

← Unanswered questions and future research

Since less than half of the respondents had past experience in patient enrollment, unsuccessful physician recruiters were **ill-prepared** for practical procedures, such as participant estimation and obtaining informed consent in the clinical trial.

Perhaps more important than the age of the building is the newness of its technological infrastructure. The latter **may not** necessarily correlate with the building age, though it **could be** captured in the age of plant variable and **may explain the findings we observed**.

Conclusion section

- State conclusions in clear, simple language
- Do not simply reiterate results or the discussion
- Indicate opportunities for future research, if not already stated in the discussion section

The conclusion also provides a place for you to persuasively and succinctly restate your research problem, given that the reader has now been presented with all the information about the topic.



In this article, we have argued that democratization spurs states to enter IOs since doing so helps leaders in democratizing states credibly commit to maintain domestic reforms and reduces the ability of future leaders to roll back reforms.

By using slightly different methods than Hibbs's, I have estimated that the impact of political party on unemployment rate in the postwar United States is about 1 percent over eight years; this is somewhat less than half of Hibbs's estimate. **Furthermore, there is considerable variance in the impact on unemployment of administrations of the same party label.**

The Thomas result was obtained variationally as an upper bound, and it referred only to the ground state, **whereas our present treatment** covers all the bound states.

Further studies, using a variety of methods, **should examine** what organizational factors, such as policies, norms, and cultures, could explain these relationships.

Because of the various study limitations, **further study is warranted** to determine the generalizability of the present findings to other areas and to international settings.

A short note about references (again)

- Be sure to check with the journal how it prefers references to be cited
 - In-text citation
 - Endnote
 - Footnote
- Loosely follow the preferred style in your field, but always check each journal's preferred style

Sources Consulted

- www.editage.com/insights
- <https://owl.english.purdue.edu/owl/>
- Day, Robert A. *How to Write & Publish a Scientific Paper*. 5th ed. Phoenix: Oryx, 1998.
- Johnson Jr., William. A., Richard P. Rettig, Gregory M. Scott, and Stephen M. Garrison. *The Sociology Student Writer's Manual*. 3rd ed. Upper Saddle River, NJ: Prentice Hall, 2002.
- Van Evera, Stephen. *Guide to Methods for Students of Political Science*. Ithaca, NY: Cornell University Press, 1997.

How to paraphrase effectively.

Session Outline

1. What is paraphrasing
2. How to paraphrase effectively
3. Simple checks for plagiarism

Ethical concerns of paraphrasing

- Paraphrasing becomes a problem when it is linked with plagiarism
- Causes are improper paraphrasing and lack of citation

What is paraphrasing?

Quoting

- Identical to original text
- A verbatim match

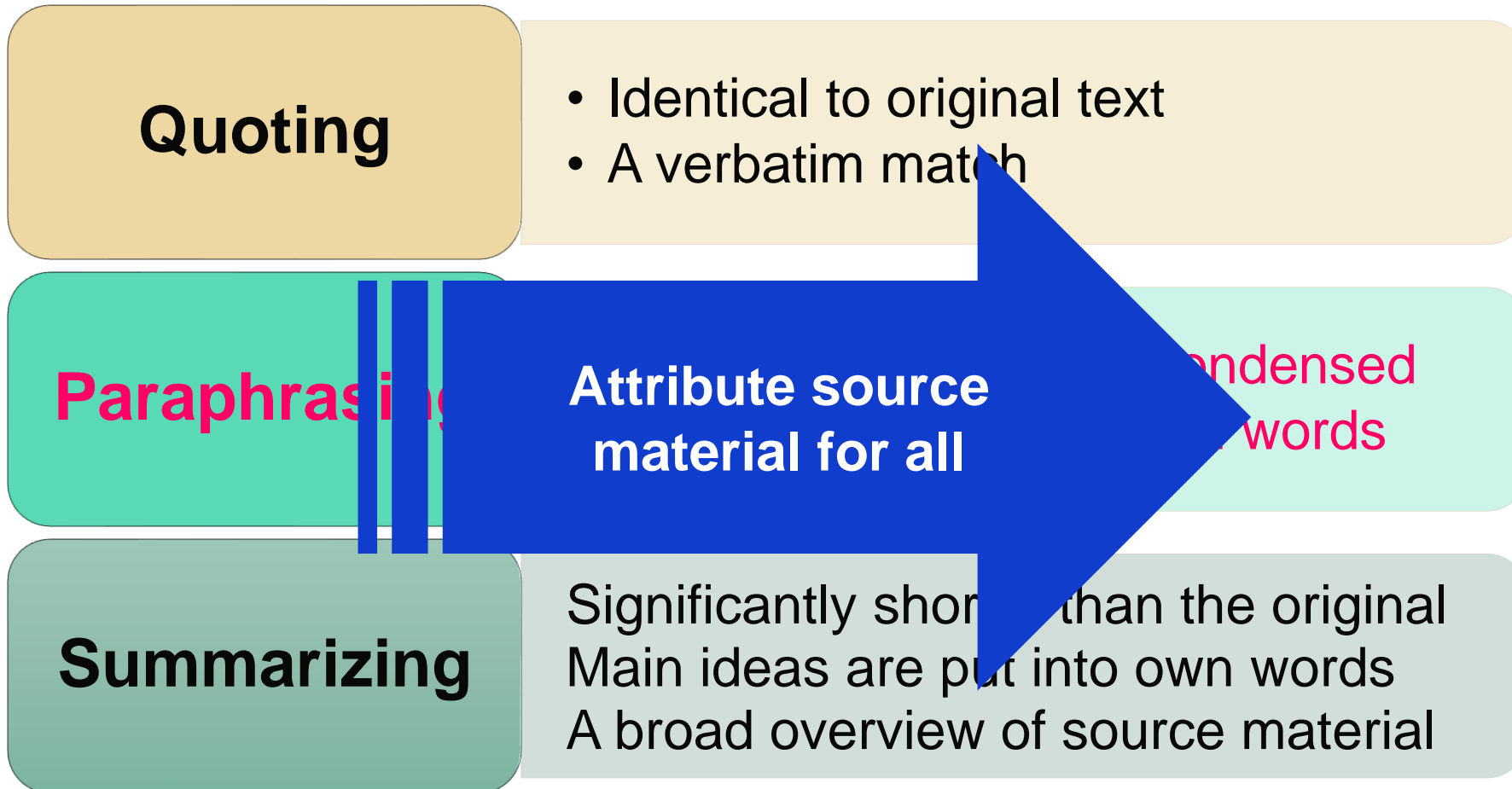
Paraphrasing

- Original text is slightly condensed
- A passage is put into own words

Summarizing

Significantly shorter than the original
Main ideas are put into own words
A broad overview of source material

What is paraphrasing?



What is paraphrasing?

- A technique that allows you to *borrow* ideas from other works
- To rewrite content from source material into your own words
- Protection against plagiarism
- You must still cite the source.

A strenuous mental exercise

- Paraphrasing is no easy exercise for ESL writers (or for native English speaking writers...)

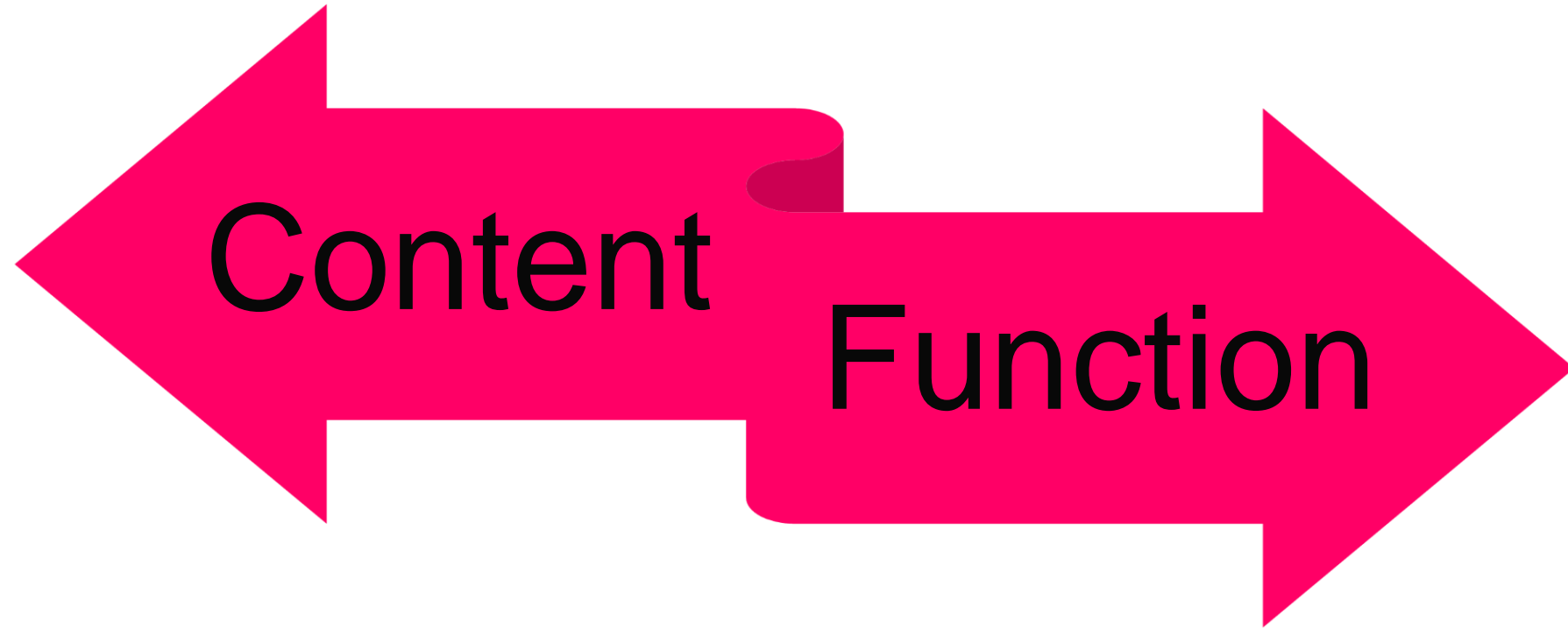
- Must read the original text several times
- Must understand the meaning very clearly
- Must have a relatively strong command of the English language
- Must end up with a completely different sentence but one which contains the same meaning

Three simple steps

1. Change non-content words (vocabulary)
2. Change the structure of the sentence
3. Change words to different parts of speech

Change non-content words

What are content words



What are content words

- Provides meaning and content
- Signaled by signal words
- Added or deleted as language changes

Nouns, verbs, adjectives, and adverbs

What are function or non-content words

- Provides structure
- Explains or shows grammar
- Does not usually change with the language

Pronouns, prepositions, conjunctions, determiners, and
quantifiers/intensifiers

What are content words

- But not any nouns, verbs, adjectives, and adverbs

Key terms or indexed terms specific to the text in a scientific paper

Change non-content words

- An example

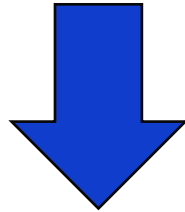
Ninety percent of the respondents said that they were “highly satisfied” with their college experience.

Can you differentiate the **content words**?

Change non-content words

- An example

Ninety percent of the respondents said that they were
“highly satisfied” with their college experience.

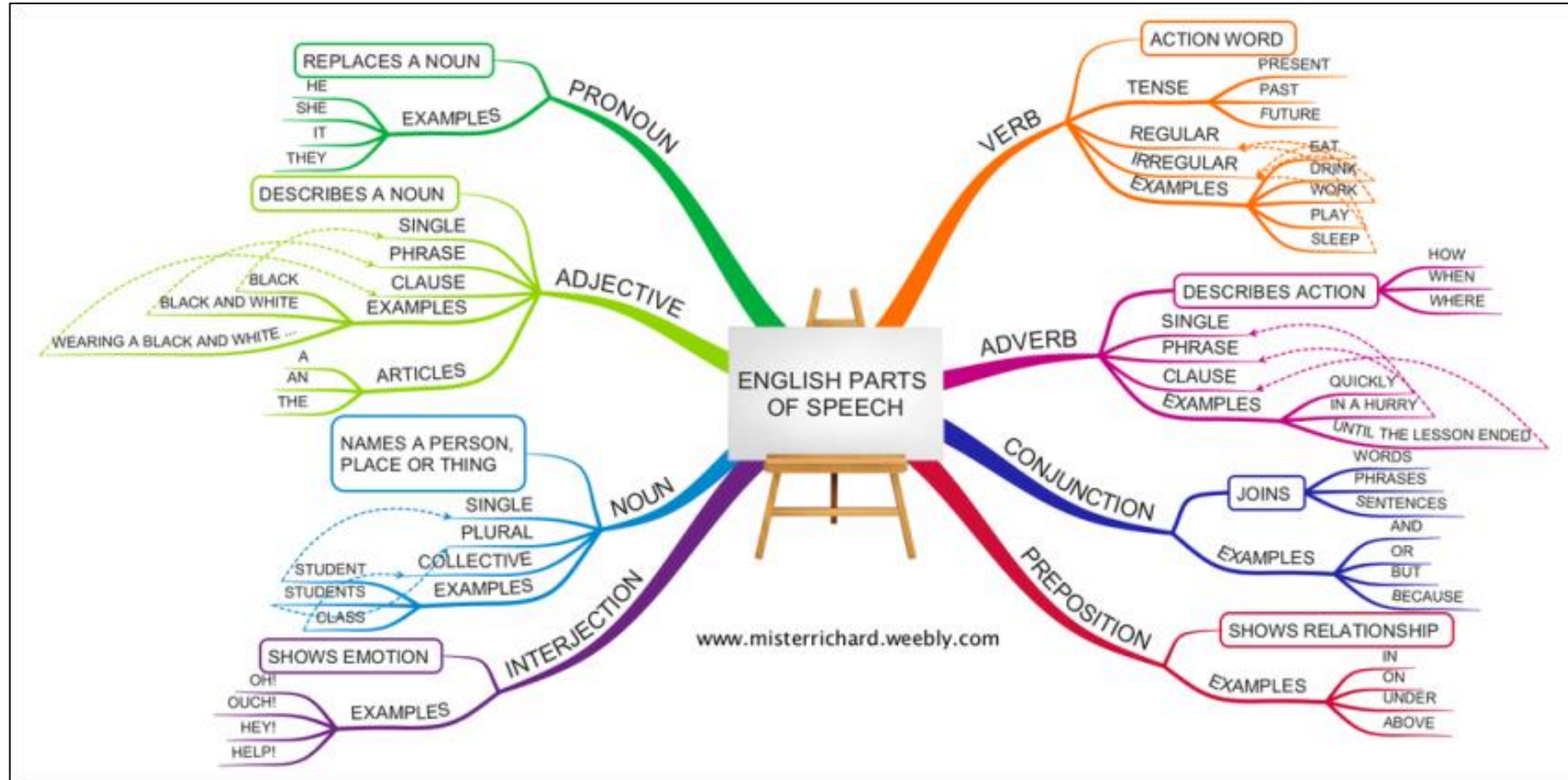


Nine out of 10 people surveyed described being
“highly satisfied” with college life.

Change sentence structure

Change sentence structure

- Sentences are made up of different parts of speech



Different structures of the sentence

1. Simple sentences
2. Compound sentences
3. Complex sentences
4. Compound-complex sentences

1. Different structures of the sentence

A simple sentence

Independent sentence

The major stages of differentiation and the key genes participating in this process are now well characterized.

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A compound sentence

Independent sentence + Independent sentence

We have analyzed this process, and our findings support a much more dynamic view than previously described.

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A compound sentence

Independent sentence + Independent sentence

We **have analysed** this process, **and** our findings
support a much more dynamic view than previously

Coordinating conjunctions:
For And Nor But Or Yet So

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A complex sentence

Independent sentence

+ Dependent clause

Adverb clauses:

when, while, because, although, if, so, that

Adjective clauses: who, whom, which, whose, that

Noun clauses: wh-question word, that, whether, if

1. Different structures of the sentence

A complex sentence

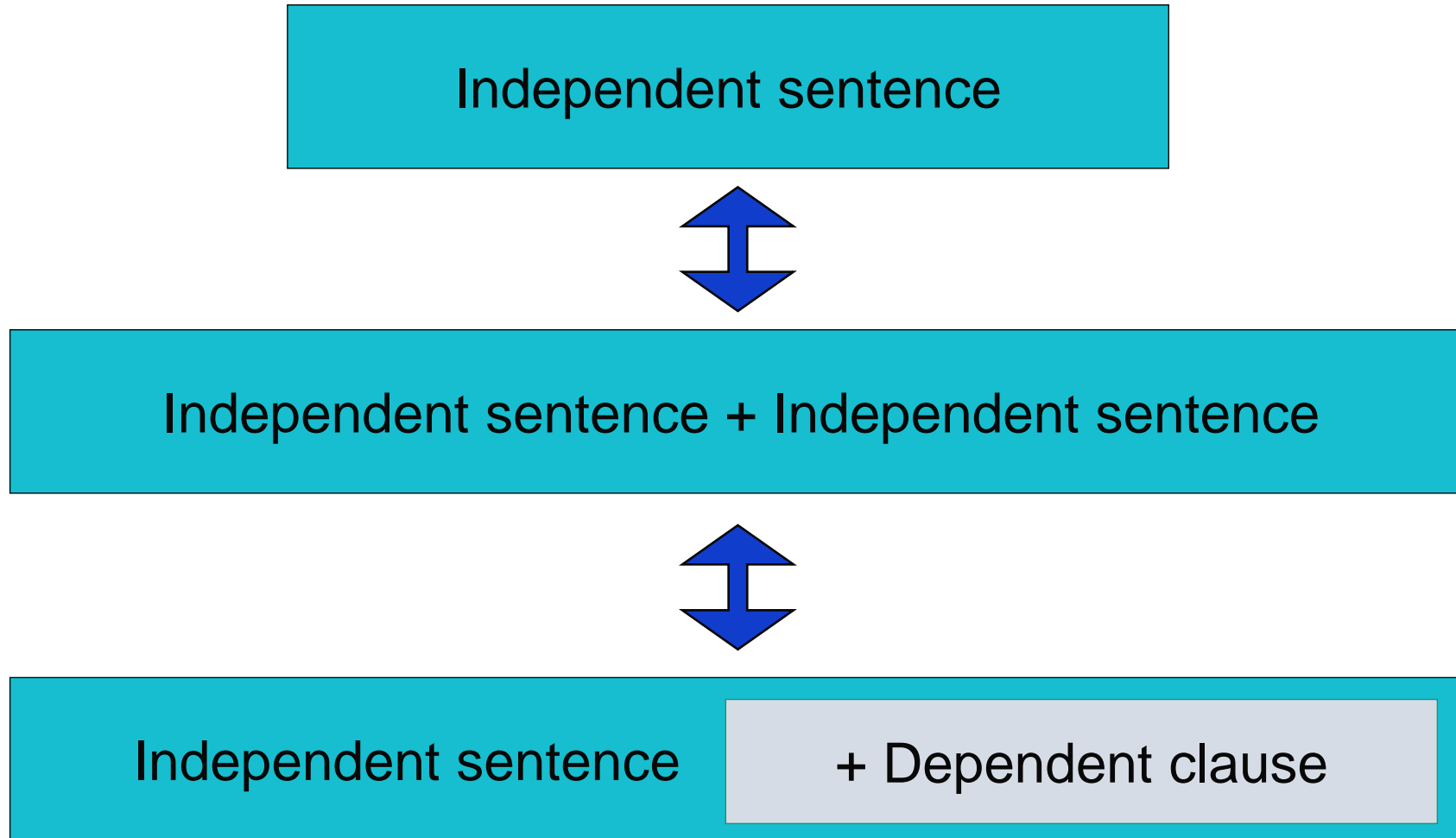
Independent sentence

+ Dependent clause

The transcriptome of the same cell can be analyzed only once, because the cell is destroyed by RNA extraction.

Moussy A et al. (2017) PLoS Biology

Change sentence structure



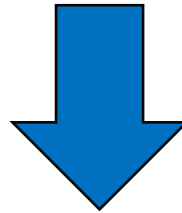
1. Change sentence structure

Although correct cell type classification is a key step in understanding the cell fate decision issue, it cannot reveal the dynamic features of the fate commitment process and leaves a number of unanswered questions.

Moussy A et al. (2017) PLoS Biology

1. Change sentence structure

Although correct **cell type** classification is a key step in understanding the **cell fate** decision issue, it cannot reveal the dynamic features of the **fate commitment** process and leaves a number of unanswered questions.



Moussy A et al. (2017) PLoS Biology

Classifying cell type correctly is vital to understand how cell fate is decided, but it provides little information on how mechanistic processes underlying fate commitment work.

1. Change sentence structure

Classifying cell type correctly **is** vital to understand how **cell fate** is decided, **but it provides** little information on how mechanistic processes underlying **fate commitment** work.

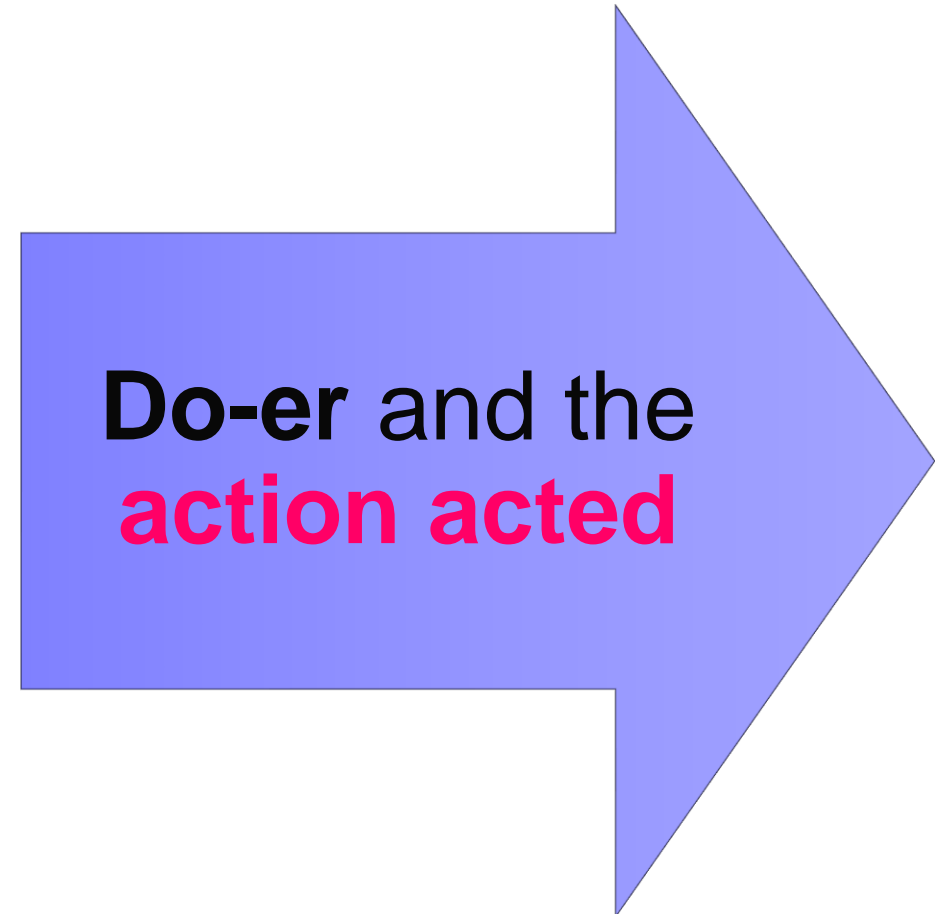
Moussy A et al. (2017) PLoS Biology

Change words to different parts of speech

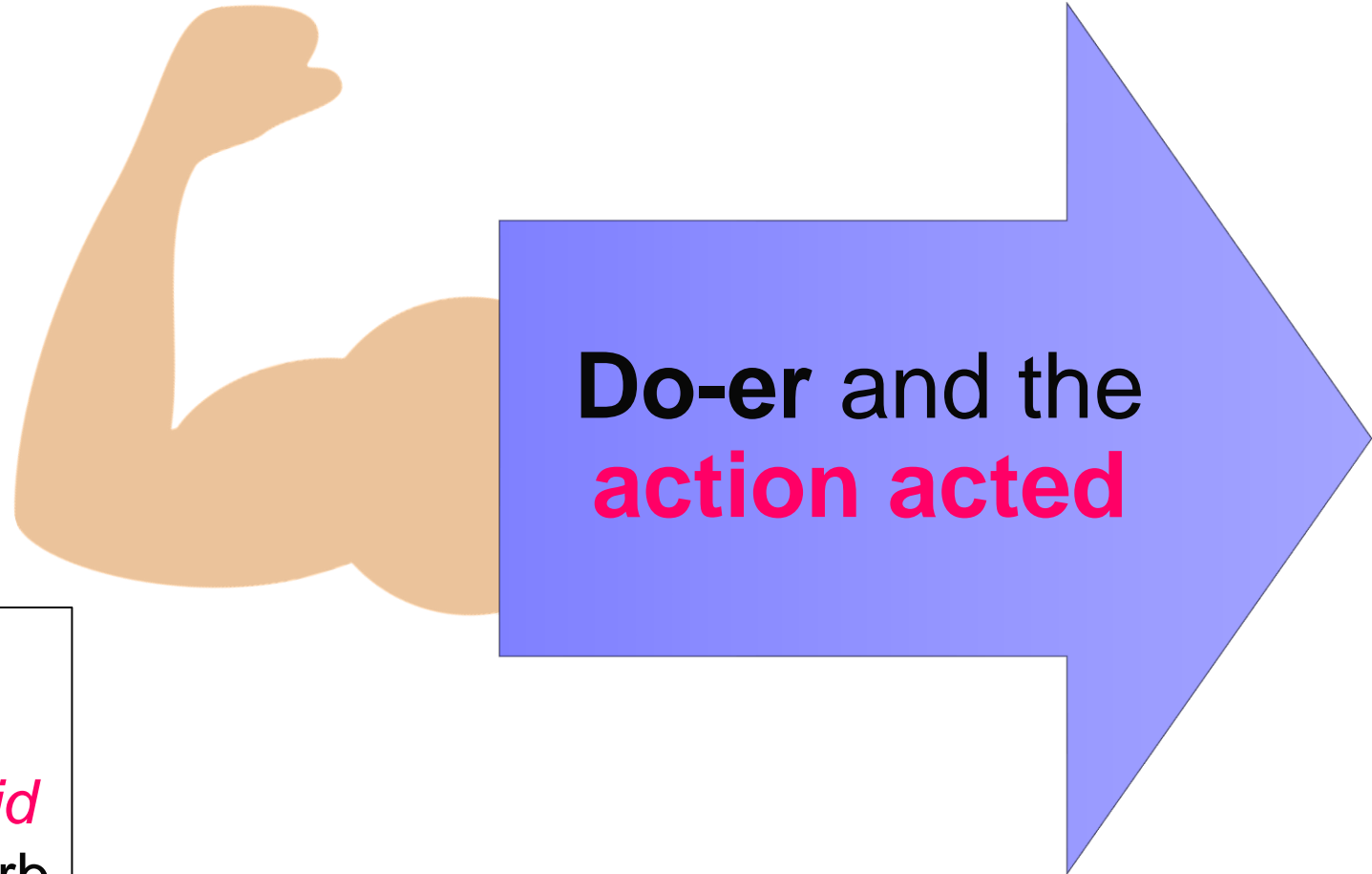
Voice in scientific writing

- The use of voice should be **selective**
- Voice should be selected on the basis of what needs to be emphasized

Main differences



Main differences



Emphasis

- The subject
- What the subject *did*
- Stronger subject-verb

Main differences

**Receiver and
the *action
received***



Emphasis

- The object
- What *received* the action
- Weaker subject-verb

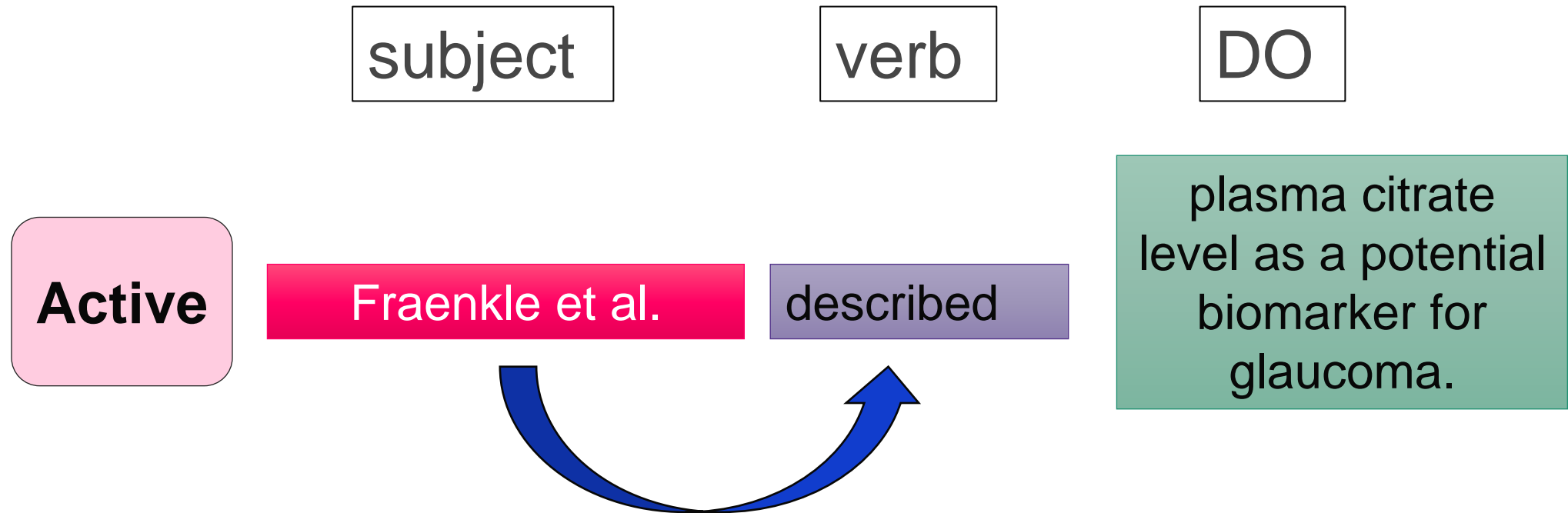
Verbs followed by direct object

subject

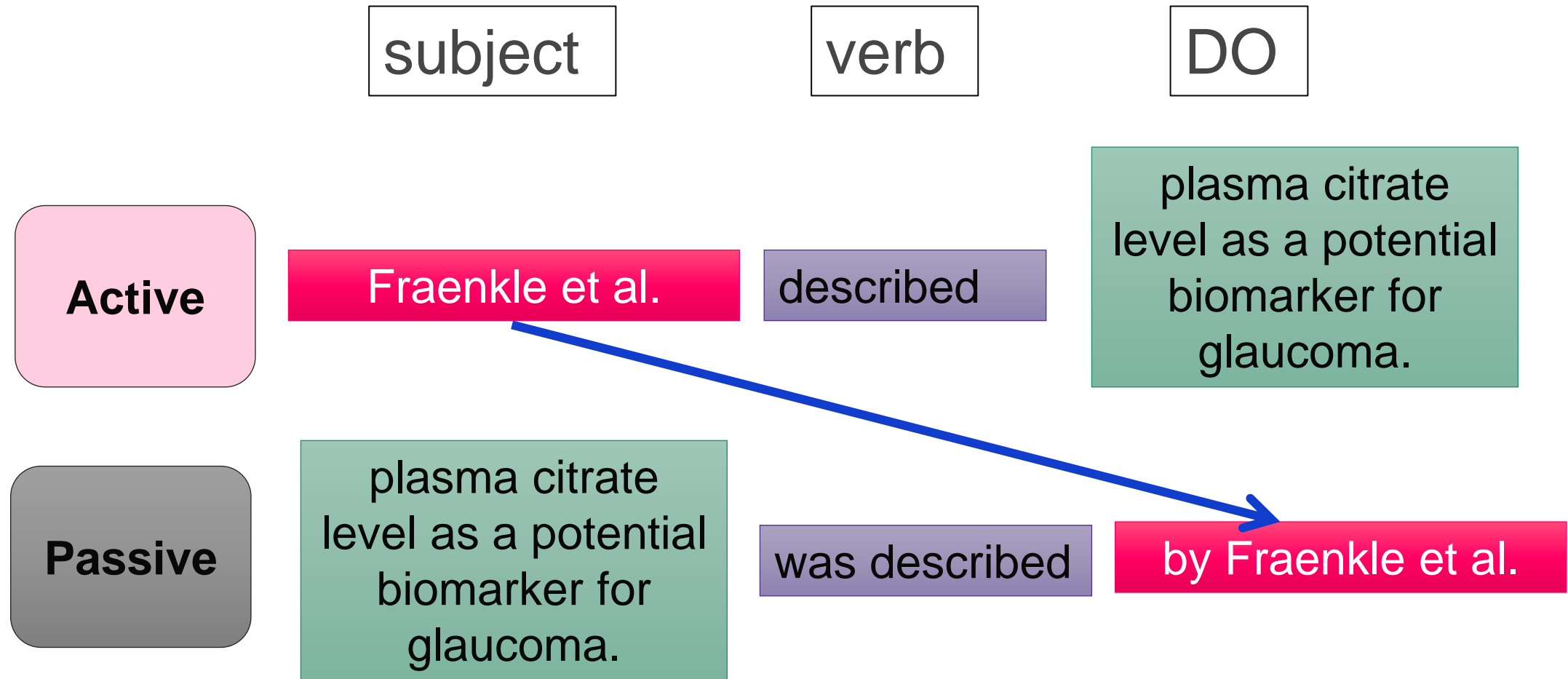
verb

DO

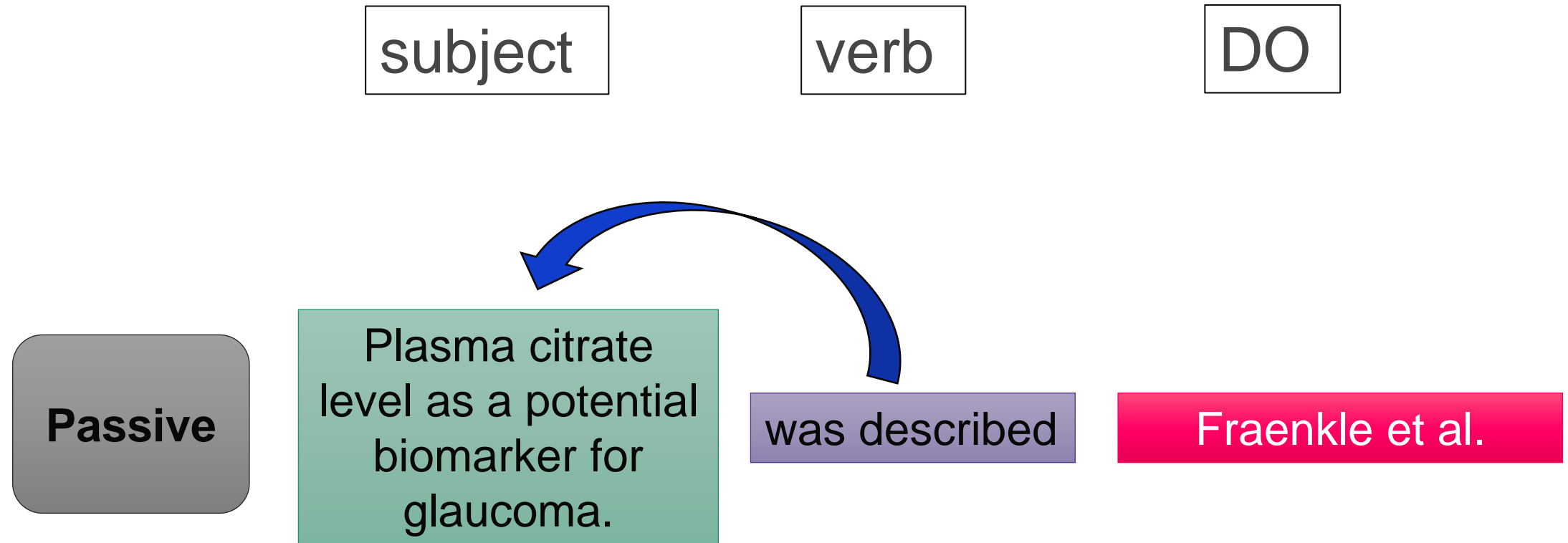
Verbs followed by direct object



Verbs followed by direct object



Verbs followed by direct object



Verbs followed by direct object

- Many verbs used in reporting science only require direct objects.

“Reporting” verbs

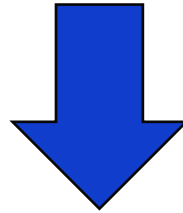
announce
demonstrate
describe
introduce
report
suggest

Changing voice

Plasma citrate level as a potential biomarker for glaucoma was described for the first time by Fraenkl et al. who accidentally found low level of citrate in patients with glaucoma.

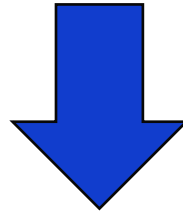
Changing voice

Plasma citrate level as a potential biomarker for glaucoma **was described** for the first time by Fraenkl et al. *who accidentally found low level of citrate in patients with glaucoma.*



Changing voice

Plasma citrate level as a potential biomarker for glaucoma **was described** for the first time by Fraenkl et al. **who** accidentally found **low level of citrate** in patients with **glaucoma**



After serendipitously **finding** that **low citrate level** is associated with **glaucoma**, Fraenkle et al. first **suggested** that plasma citrate level may be used as an indicator of glaucoma.

Clarity and Emphasis

Clarity and voice

- Voice is connected to clarity
- Appropriate choice of voice is important for clarity



Clarity and voice

1st sentence

The effects of oxytocin on HR **remain** unclear.



2nd sentence

Active

On the one hand, Gutkowska et al. **have reported** that oxytocin reduces HR.



3rd sentence

Passive

On the other hand, there are studies showing that HR in mice, rats, and dogs **is increased** by oxytocin.

Clarity and voice

1st sentence

The effects of oxytocin on HR **remain** unclear.



2nd sentence

Passive

On the one hand, oxytocin **has been reported** to reduce HR.



3rd sentence

Active

On the other hand, there are studies showing that oxytocin **increases** HR in mice, rats, and dogs.

Emphasis and voice

- Passive Voice is selectively used to emphasize information



Always think about where you want emphasis

We used fMRI to examine the neural response in frontal and parietal cortices.

Chao LL & Martin A (2000) NeuroImage

- Where is the emphasis in the above sentence?

Always think about where you want emphasis

We used **fMRI** to examine the **neural response** in **frontal and parietal cortices**.

Chao LL & Martin A (2000) NeuroImage

- This sentence can be re-written in different ways so that in each revision the emphasis is variably placed
- The active and passive voice is chosen depending on which word is emphasized

Always think about where you want emphasis

We used fMRI to examine the neural response in frontal and parietal cortices.

fMRI was used to examine the neural response in frontal and parietal cortices.

The neural response in frontal and parietal cortices was examined through fMRI.

The frontal and parietal cortices were examined for the neural response through fMRI.

Danger signs of poor paraphrasing

1. Inconsistency
2. Repetitiveness or excessive detail
3. Lack of cohesion



Inconsistency

- Inconsistent **style or quality writing**
- Inconsistent spelling, such as a **mixture of UK and US spelling**
- Inconsistent **terminology and abbreviations**

Repetitiveness or excessive detail

Different aspects of a thesis require *different* expressions, that is, a *different* word reflecting a *different* perspective on your paper's theme as it relates to *different* circumstances.



"*Different* aspects of a thesis require *their own* expressions, that is, a *certain* word chosen to reflect each *individual* perspective on the theme as it relates to *particular* circumstances."

Lack of cohesion

- Lack of cohesion between sentences or paragraphs
- Especially evident from the use of conjunction
- No scientific logic between steps of the writing

Summary

- Paraphrasing requires a lot of mental work.
- Rewriting the text does not mean it is your original work—must cite the source material ALWAYS
- There are many ways to paraphrase but remember not to lose the original meaning
- Use various techniques of paraphrasing

Writing resources & references

- Essentials of Writing Biomedical Research Papers—Mimi Zeiger
- AMA Manual of Style: A Guide for Authors and Editors
- <http://www.editage.com/insights/what-are-some-techniques-for-effective-paraphrasing>
- <http://www.editage.com/insights/how-to-paraphrase-english-text-effectively> (video)
- <http://www.editage.com/insights/practical-tips-for-improving-medical-papers>

Thank you

Phillip Gary Schrank, PhD Candidate

Academic Trainer at Editage

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