



Organização: Pró-Reitoria de Pesquisa - USP



Workshop de Capacitação em Escrita Científica

Módulo 5

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USP, 2011

Módulo 1: O Gênero Literário

Seções de Um Artigo Científico

Módulo 2: Estrutura 1: *Abstract*

Módulo 3: Estrutura 2: *Introduction*

Módulo 4: Estrutura 3: *Results and Discussion, Conclusion*

Módulo 5: Estilo

Linguagem 1: Especificidade, Complexidade e Ambiguidade

Módulo 6: Linguagem 2: Redundâncias, Ação no Verbo, Fluidez de Texto, Ritmo de Escrita

Módulo 7: Linguagem 3: *Plain English*, Escrever em Inglês, Preposições

Módulo 8: Linguagem 4: *Topic Sentences, Cover Letters, Final Remarks*

Módulo 5

- Estilo

- Linguagem 1:

Especificidade, Complexidade e Ambiguidade

Scientific Writing Style

Define the abbreviation in parentheses the first time you use it:
Green Fluorescent Protein (GFP)

U.S. citizens;
U.K. football team
(Adjectives)

or

“The citizens from United States....”
“The football team of United Kingdom....”
(nouns)

Units of measure are abbreviated : **2 mm.**; **10 min.**

In a non-measurable context: "we measured length in millimeters"

OBS: Never add an "s" to the measure unit.

A good reference material may be found at:

The *ACS Style Guide*, *Dodd, J. S.*, Ed;
American Chemical Society, Washington, DC, 2006

Use a space between the number and the unit:

6 min, 0.3 g, 80 mL, etc.

Exception: %, \$ and °

50%, \$400, 180° (Obs: 90 °C, 180 °F).

You are reporting a work that has been completed !!

Use **past tense** for sentences concerning your findings.

This study **was** aimed at investigating.. (**The study**)



Passive voice **almost** always requires more words than
Active voice:

ACTIVE: “the melting processing *consumed* polymeric material at a higher rate..” (10 words)

PASSIVE: “Polymeric material *was consumed* by the melting process at a higher rate..” (12 words)

Mathews, JR and Mathews RW, *Successful Scientific Writing*, Cambridge University Press; 3 edition 2007)

Dodd, J. S., Ed. *The ACS Style Guide*; American Chemical Society: Washington, DC, 1986.).

Third person constructions has been preferred in Scientific Papers. First person sentences also appears.

Avoid	“In Our analysis we observed that the virus incorporated into the cells”
Better	“Analysis revealed that the virus incorporated into the cells.”



Language I

The efficient writing is specific

“Novel strategies have been proposed to overcome the limitations regarding the diagnosis of specific diseases.”

Too general!!

What were the strategies?
What are the limitations?
What are the diseases?

Wording

Stress the most important details in a sentence!!

Ex: High levels of the protein were found in the blood samples from patients with hemorrhagic infections.

What is the most important detail?

The protein, the levels or the infection?



A huge problem: **Long Sentences**

The mechanical analyses had been carried out using stress-strain measurements and indicated that the copper-based alloys are more resistant than the silver-based ones, which may be due to the fabrication process used for each composite material, since the copper alloys had been produced via casting, whereas the silver composites had been fabricated via reactive extrusion under high pressures, controlled atmosphere, and at temperatures ranging from 300 – 400 °C.

?????????

Too long!, Too wordy!

Too many ideas in a single sentence!!

Streamlining it:

First half of the sentence:

The mechanical analyses had been carried out using.....

Second half :

.....

A new methodology for protein purification is presented. Isolation techniques using HPLC are discussed. The amount of protein purified in each cycle is revealed.

This study describes a new methodology for protein purification using novel techniques based on HPLC experiments. Each purification cycle provided a total amount of 1.2 mg of protein.

Better!!

Active voice is straightforward

Word Choice:

Be careful with:

as, only, since

Word Choice:

“Tissue temperature increased as the particles released the phytotherapics”

????

The word “**as**” may be interpreted as “because” or “while”

Exercises at:

<http://www.writing.engr.psu.edu/handbook/exercises/exercise4.html>



Sources

-Michael Alley. *The Craft of Scientific Writing*, 3rd edition (Springer-Verlag, 1996).

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Dodd, J. S., Ed. *The ACS Style Guide*; American Chemical Society: Washington, DC, 1986.).



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Workshop de Capacitação em Escrita Científica

Módulo 6

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Módulo 6

Linguagem 2:

Redundâncias, Ação no Verbo, Fluidez da Escrita, Ritmo de Escrita



Language II

During the data collection phase of the study, all experimental measurements were performed in a period of time of 3 months. All the obtained results were further analyzed and possible errors were completely eliminated.

Better ??

During the data collection, all measurements were performed in 3 months. The results were further analyzed and possible errors were eliminated.

Não-Nativos tendem a “Substantivar”
os Verbos

Why?????

A Clear and Effective Writing is made of Smooth Transitions between Ideas, Sentences, Paragraphs

Problem: Complementary ideas disconnected and/or placed far way from each other.

Transition within a sentence

1) Reason:

Because, since, due to,....

Example: The size of the nanoparticles was ca. 5 nm because of the synthetic route employed.

Transition within a sentence

2) Consequence:

therefore, as a consequence,....

Example: The enzymes showed a high specificity to pesticides, therefore allowing its use in biosensors.



Sentence Openers: **Rhythm**

DNA sensing has been considered a powerful tool to diagnose cancer. Cancer diagnosis is usually not straightforward due to a large number of pathologies variations as well as to the very low amount of DNA molecules expressed in the beginning of disease. Sensors capable of detecting specific types of tumoral cells may represent a breakthrough in medicine. This paper describes the development of special sensors for cancer detection. The sensors comprise immobilized antibodies that recognizes specific types of proteins produced by cancer cell. The sensor systems were produced using different immobilization strategies. The results show that different types of cancer cells can be detected at very low limits of detection. The experiments were carried out in triplicate. The systems we developed will be evaluated in clinical trials in a few months. Many medicine areas will benefit from our new technologies.

?????



Sources

-Michael Alley. *The Craft of Scientific Writing*, 3rd edition (Springer-Verlag, 1996).

Science Research Writing for Non-Native Speakers of English, Hilary Glasman-Deal, Imperial College Press, 2009

Mathews, JR and Mathews RW, *Successful Scientific Writing*, Cambridge University Press; 3 edition 2007)



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