Capacitação em Escrita Científica

Módulo 6

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Workshop Outline

Modulo 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*

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Linguagem 2:

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

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Language II

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Redundancies

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.

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Better:

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

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Redundancies

Best:

> **All measurements were performed in 3 months.**

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Efficient Scientific Writing:

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Redundancies

Common redundancies from Non-Native Speakers

Alternative choices
Basic fundamentals
Completely eliminate
Currently underway
Empty space
Introduced a new
Mix together
Never before

Period of time
Separate entities
Still persists
Quite unique
Very similar
Join together
Completely full

Obtained Results
Definitely proved
Exactly true
First of all

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

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Strong Nouns

Strong nouns provide a "visual image" to the reader.

A short list of abstract nouns:

Ability, approach, capability, concept, environment, factor, nature, parameter,....

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

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Não-Nativos tendem a "Substantivar" os Verbos

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Strong Verbs

Replace verb phrases by the correspondent strong verb

Weak verb phrase	Strong Verb
Made the arrangement for	Arranged
Made the decision	Decided
Made the measurement of	Measured
Performed the development of	Developed

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"A continuous increase in the number of charity events was observed"

Better:

"The number of charity events increased"

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Administration of dopamine produced a decrease in the frequency of convulsions

Better:

Administration of dopamine decreased convulsions frequency

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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.**

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The **level of the proteins** found in the blood samples is similar to that observed by other researchers. Due to its ability to form complexes with DNA and RNA, such proteins had been extensively investigated by a number of research groups, including the group from Harvard, which estimated that the normal level of the protein in blood should be **around 1 mg/dL.**

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Better:

The level of the proteins found in the blood samples was 1 mg/dL, which is similar to that observed by Harvard´s group.

The word *which* brings the ideas closer to each other!

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Transitional words 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.

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Transitional words within a sentence

2) Consequence:

therefore, as a consequence,….

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

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Transitional words within a sentence

3) Concession:

      Although, even though, ….

Example: Although individual residues in the repeated-sequence blocks in the core have diverged, the patterns of amino acids are identical.

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Smooth Transition between sentences

1) Continuation: indicates that the movement of ideas will continue in the same direction:

Examples:
Also;
Moreover;
first, second…;
In addition;

……..

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Smooth Transition between sentences

2) Pause: indicates that the movement of ideas will pause.

Examples:
   For example;
   In other words;
   …….

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Smooth Transition between sentences

3) Reversal: indicates that the movement of ideas will reverse direction.

Examples:
   However;
   In contrast;
   On the other hand;
   Conversely;
   Contrarily;

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Smooth Transition between sentences

4) Conclusion: Concludes the idea.

Examples:
In summary
Concluding
…….

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Rhythm

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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.

????

Vary sentence openers

Topic of Sentence	←	Subject
Time of action	←	Prepositional Phrase
Location of action	←	Prepositional Phrase
Manner of action	←	Adverb
Subordinate action	←	Dependent Clause
Reason for action	←	Infinitive Phrase

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Flow

adverb

Recently, DNA sensors….

dependent clause

Although cancer diagnosis is not straightforward ,….

infinitive phrase

To optimize the systems….

subject-verb

The results show that….

prepositional phrase

In a few months, the systems will be….

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Recently, DNA sensing has been considered a powerful tool to diagnose cancer. **Although** cancer diagnosis is not straightforward, due to a large number of pathologies variations, this strategy may be very efficient for some cancer types. **Sensors** capable of detecting specific types of tumoral cells may represent a breakthrough in medicine. **In this paper we** describe the development of special sensors for cancer detection. The sensors comprise immobilized antibodies that recognizes specific types of proteins produced by cancer cell. **To optimize** the systems, the sensor 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. **In a few months**, the systems will be evaluated in clinical trials. **Since highly** sensitivity and specificity were achieved by the sensors, clinical areas may benefit from our new technologies.

Rhythm !!!!

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

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Muito Obrigado

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