

Scientific Writing

Writing High Impact Papers

Module 6

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Module 1: Literary Genre

Module 2: Structure 1: *Abstract*

Module 3: Structure 2: *Introduction*

Module 4: Structure 3: *Results and Discussion, Conclusion*

Module 5: Style, Language 1: Complexity Problems 1

Module 6: Language 2: Complexity Problems 2, Rhythm

Module 7: Language 3: *Plain English and Topic Sentences*

Module 8: Manuscript Submission, The Editorial Process

Module 6

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.



Best:

All measurements were performed in 3 months.



Common redundancies

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).



Replace verb phrases by the correspondent strong verb

Weak verb phrase

Made the arrangement for

Made the decision

Made the measurement of

Performed the development of

Strong Verb

Arranged

Decided

Measured

Developed



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.



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!



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.



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.



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.



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;

.....



Smooth Transition between sentences

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

Examples:

For example;

In other words;

.....



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;



Smooth Transition between sentences

4) **Conclusion:** Concludes the idea.

Examples:

In summary

Concluding

.....



Rhythm



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.

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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

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



- 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)

Prof. Zucolotto as a Scientific Editor

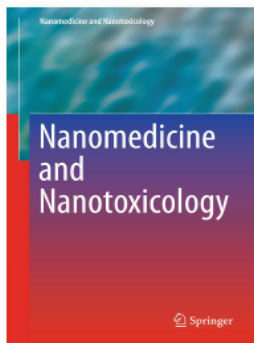
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Thank You

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