

SD4H Scientific Writing Course
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Clarity Clinic

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List for Writing Clear Sentences

1. Active versus passive voice
2. Put the Action in the Verb
3. Write Shorter Sentences
4. Use Clear Pronouns
5. Write Comparisons Clearly
6. Keep Subject and Verb Close Together

1. Active vs. Passive Voice

Use the ***active voice*** to focus on the person who is performing the action, as when stating a goal, intention, or hypothesis.

Use the ***passive voice*** to emphasize the object that is being acted upon, as in describing a method.

Passive: The hypothesis was tested.

Active: We tested the hypothesis.

1. Active vs. Passive Voice

Example

Histological examination of the resected colon was performed in every case.

1. Active vs. Passive Voice

Revision

We always characterized the resected colons histologically.

Active versus passive

Passive: Blood samples were drawn.

Active: We drew blood samples.

Livelier

Active voice cont...

When using active voice, strategies to avoid overuse of “we”:

- Vary the beginnings of the sentences. Begin some sentences with the purpose or reason:

Ex. To prepare isolated surface layers for electron microscopy, **we** resuspended the 0.1-ml pellets of packed, washed surface layers...

Active voice

Another strategy

Begin some sentences with a transition word or phrase:

Ex. After 30s, **we** centrifuged the samples.

Ex. Then **we** centrifuged the suspension as before.

2. Put the Action in the Verb

Liberate Imprisoned Verbs!

Look for "increase" and "decrease" as nouns.

Example: We saw an increase in VL:

Revise: Viral load increased

Look for weak verbs, such as...

was achieved

was observed

was noted

was seen

Liberate Imprisoned Verbs!

Look for nouns made from verbs:

-tion	prolongation, formation
-ment	measurement, assessment
-ence	occurrence, existence
-al	removal, disposal

Liberate Imprisoned Verbs!

Example: Isolation of cells was carried out as previously described.

Revision: We isolated cells as previously described.

3. Write Shorter Sentences

Average length should be < 22 words.

- Balance 2 or 3 long sentences by writing a short sentence.
- The short sentence has the strongest impact.

3. Write Shorter Sentences

How would you revise this sentence?

An advantage of the GSEA approach is that unlike the methods described above that use strict criteria to classify genes as either being differentially expressed or not differentially expressed – which are then examined for enrichment of various categories using IPA, GSEA uses all of the genes in a gene set (e.g., a pathway or functional group) to determine the expression status of the gene set as a whole, whether or not any individual genes in that set meet the strict criteria for differential expression.

84 words

3. Write Shorter Sentences

Revision (3 sentences)

1 The GSEA approach has an advantage over the methods described above. **2** Those methods use strict criteria to classify genes either as being differentially expressed or not differentially expressed, and then use IPA to examine the genes for enrichment of various categories. **3** In contrast, GSEA uses all of the genes in a gene set (e.g., a pathway or functional group) to determine the expression status of the gene set as a whole, whether or not any individual genes in that set meet the strict criteria for differential expression.

4. Use Clear Pronouns

Pronouns: words that replace and refer to a noun:

it, he, she, they, those, these, them

this, that, which...

4. Use Clear Pronouns

If the noun that a pronoun refers to is unclear, the reader may have trouble understanding the sentence.

Example

We abruptly occluded the vena cava before analyzing the heart beats. As a result of **this**, the volume of the right heart rapidly decreased.

What does “this” refer to?

4. Use Clear Pronouns

In this example, the implied concept that "this" refers to is "occlusion"...so repeat "occlusion".

Revision

We abruptly occluded the vena cava before analyzing the heart beats. As a result of **this occlusion**, the volume of the right heart rapidly decreased.

5. Write Comparisons Clearly



- ✓ Overuse of “compared to”
- ✓ Comparison of unlike things

5. Write Comparisons Clearly

Example

The men had a 28% decrease in compliance as compared to women.

This comparison is ambiguous. What happened in the women?

5. Write Comparisons Clearly

Decrease in both groups:

The men had a 28% greater decrease in compliance than did the women.

5. Write Comparisons Clearly

Decrease only in the men:

The men had a 28% decrease in compliance
but the women had no decrease.

5. Write Comparisons Clearly

Decrease in neither group (the men just had *less*):

The men had 28% less compliance than did the women.

5. Write Comparisons Clearly



Don't compare apples and oranges!

Example:

These results were similar to previous studies.

5. Write Comparisons Clearly

Revision 1

These results were similar to results of previous studies.

Revision 2

These results are similar to those of previous studies.

6. Keep the Subject and Verb Close Together

Example

The emergence of virulent *Plasmodium falciparum* in Africa within the past 6,000 years as a result of a cascade of changes in human behavior and mosquito transmission has recently been hypothesized.

- **Where is the subject in this sentence?**
- **How many words come between it and the verb?**

6. Keep the Subject and Verb Close Together

Revision

The emergence of virulent *Plasmodium falciparum* in Africa within the past 6,000 years has been hypothesized to result from a cascade of changes in human behavior and mosquito transmission.

Sentence Structure Exercises



Sentence Structure Exercises

Example

A progressive decrease in the death rate occurred.

Sentence Structure Exercises

Revision

The death rate decreased progressively.

Sentence Structure Exercises

Example

Prolongation of life for HIV patients has been made possible by improved treatment.

Sentence Structure Exercises

Revisions

The lives of patients with HIV have been prolonged by improved treatment.

Improved treatment has prolonged the lives of HIV patients.

Patient with HIV live longer because of improved treatment.

Sentence Structure Exercises

Example

Shunt blood clotting occurred after 5 days.

Sentence Structure Exercises

Revisions

Blood clotted in the shunt after 5 days.

Blood in the shunt clotted after 5 days.

Paragraphs



Paragraphs Make Writing Accessible

- by **breaking your writing up** so that readers do not encounter long, unbroken stretches of print.
- by **organizing and developing ideas** into paragraph form, treating *each idea* in a *paragraph*, and connecting the paragraphs to each other.

For a Paragraph to Tell a Clear Story...

- The ideas in the paragraph need to be organized.
- The relationship between ideas (continuity) must be clear.
- Important ideas must be emphasized.

Paragraph Organization



Overview first, then details...

Paragraph Organization

Use topic sentences to state the main idea of the paragraph clearly and directly.

Keep topic sentences short and simple.

Supporting Sentences

Details that support the topic sentence are written in the remaining sentences, which are organized in a logical way.

Organization: Example 1

Problem gambling leads to other socially destructive behavior. According to Lorenz, problem gamblers not only tend to have a high number of auto accidents, but they often do not have insurance to cover the costs of damages. This not only results in economic losses and physical problems to themselves, but to others involved in the accidents...etc.

Organization: Example 2

One reason for good teaching in Japan's primary and secondary schools is that the profession attracts excellent people. In opinion polls, teachers are highly respected and awarded higher prestige than engineers or officials in city hall. Teachers are also paid very well, earning salaries that are higher than those of pharmacists and engineers...etc.

Continuity

...the smooth flow of ideas from sentence to sentence (and from paragraph to paragraph).



Four Techniques for Creating Continuity

1. Repeating key terms
2. Using transitions to indicate relationships between ideas
3. Keeping consistent order
4. Keeping a consistent point of view

Continuity 1: Key Terms

name important ideas in the paper...

can be technical:

G-protein ♦ mitogenesis ♦ decisional conflict

can be non-technical:

Increase ♦ Social support ♦ Food insecurity

should be repeated **exactly** from sentence to sentence and paragraph to paragraph.



The reader's job is easiest if you
use *only one term to mean one thing* and repeat it exactly
throughout the paper.



Key Terms

Example

Digitalis increases the contractility of the heart. This change in inotropic state is a result of changes in calcium flux through the muscle membrane.

Key Terms

Revision

Digitalis increases the contractility of the heart. This increased contractility is a result of changes in calcium flux through the muscle membrane.

Continuity 2: Transitions

Transitions can be words, phrases, clauses, or even sentences:

therefore * thus * for example

first * second * third* last

in addition * in contrast * however

because * furthermore/moreover

in brief * although * whereas

Choose the right transition

Similarity:

likewise
similarly
in the same way

Contrast:

however
instead
nevertheless
although
in spite of
on the other hand
not only

Accumulation:

moreover
in addition to
for example

Consequence:

therefore
thus
consequently
as a result of

Causation:

because
since
for

Sequence:

first...second...third
next
subsequently
after
finally

Transitions

Are most effective when placed at the beginning of a sentence.

Are one of the most useful things a writer can do to make the story of a paragraph clear.

Transitions

Example

Although individual residues in the repeated sequence blocks in the core have diverged, the patterns of amino acids were identical.

“Although” sets up a contrast within the sentence.

Transitions

Example

Our working hypothesis that food insecurity may lead to higher levels of inflammatory markers in the blood is **supported by the following observations**. First, ... Second, ... Third,... Finally,....

Transitions

What is the logical link between sentence B and sentence A?

^A Our aim was to assess whether consultation planning could benefit patients with breast cancer.

^B We first determined how consultation planning could be modified to meet the needs of the specific cultural groups.

Transitions

What if no transition word exists to make a transition that the author wants?

^AOur aim was to assess whether consultation planning could benefit patients with breast cancer.

^BFor this assessment, we first determined how consultation planning could be modified to meet the needs of the specific cultural groups.

B now creates a transition phrase to make the connection clear.

Key Terms & Transitions

Example

Telehealth supports the organisation of health care delivery on a regional basis, allowing greater access to specialised resources and better distribution of on-call duties between physicians from a whole region.

Therefore, an indirect impact of telehealth is increased autonomy for rural and remote regions. This autonomy could generate tension between regions and levels of care since specialised services could be directly accessed via telehealth instead of the usual referral process. **Thus**, it is important to respect usual referral patterns when implementing telehealth.

Continuity 3. Keep a Consistent Order

If a topic sentence of a paragraph lists 2 or more items, the supporting sentences should describe them in that order.

Continuity 3. Keep a Consistent Order

Example

Samples of inspired, end-tidal, and mixed-expired gases were taken during the 2-h wash-in period.

After reading this topic sentence, what order do you expect the supporting details to follow?

Continuity 3. Keep a Consistent Order

Topic Sentence

Samples of inspired, end-tidal, and mixed-expired gases were taken during the 2-h wash-in period.

Supporting Sentences

Inspired gas samples were collected proximal to the non-re-breathing valve. End-tidal gas samples were collected through a catheter. Mixed–expired gas samples were collected distal to the aluminum mixing changer. All gas samples were collected in 50-ml glass syringes that were stored upright until analyzed.

Continuity 4: Point of View



Continuity 4: Point of View

If the topic of two or more sentences is the same, the subjects in all of those sentences should be the same.

Point of View

Example

Injection of naloxone produced no significant changes in arterial pressure or heart rate. The arterial pressures and heart rates measured after 24 h of morphine infusion did not change significantly.

- Here, both sentences describe a cause and an effect...
- But, the **subject of the first sentence is...the cause** (injection of naloxone), whereas the **subject of the second sentence is the effect** (arterial pressure and heart rate). Thus, the point of view is inconsistent and the similarity is not easy to see.
- How would you revise so that the point of view is consistent (either cause...or effect)?

Point of View

Revision (Point of View = cause)

Injection of naloxone produced no significant changes in arterial blood pressure or heart rate.

Twenty-four hours of morphine infusion produced no significant changes in arterial blood pressure or heart rate.

- In this revision, the category of each subject is the same—the cause.
- Now that the point of view is consistent, it's easy to see the similarity.

Point of View

Revision (Point of View = cause)

Neither injection of naloxone nor the 24-h morphine infusion significantly altered arterial blood pressure or heart rate.

- Now that the similarity is easy to see, you can see how to combine the two sentences and eliminate redundancy.

Point of View

Revision (Point of View = effect)

Arterial pressure and heart rate did not change significantly after injection of naloxone. Arterial pressure and heart rate did not change significantly after 24 h of morphine infusion.

Paragraph Structure: Summary

Organize ideas:

Overview first, in a topic sentence

Details in logically organized supporting sentences.

Make relationships between ideas clear by using techniques of continuity:

- Repeat **key terms** exactly and early in the sentence
- Use **transition words or phrases** to indicate logical relationships between ideas
- Keep a **consistent order**
- Keep a **consistent point of view**

Paragraph Structure Exercises



Clarity Clinic: Summary

1. Choose words that are precise, simple, necessary, and humane.
2. Avoid excessive use of passive voice.
3. Use clear pronouns.
4. Write comparisons correctly, clearly, and simply.
5. Write shorter sentences
6. Watch out for dangling modifiers and other problems.
7. Organize paragraphs by using topic sentences and supporting sentences.
8. Keep continuity going within a paragraph by repeating key terms, using transitions, consistent order, and consistent point of view.

Today's Homework

- **Revise**

1-2 sections of your paper

