# **Good Writing Practice**

# **SECTION EDITORS**



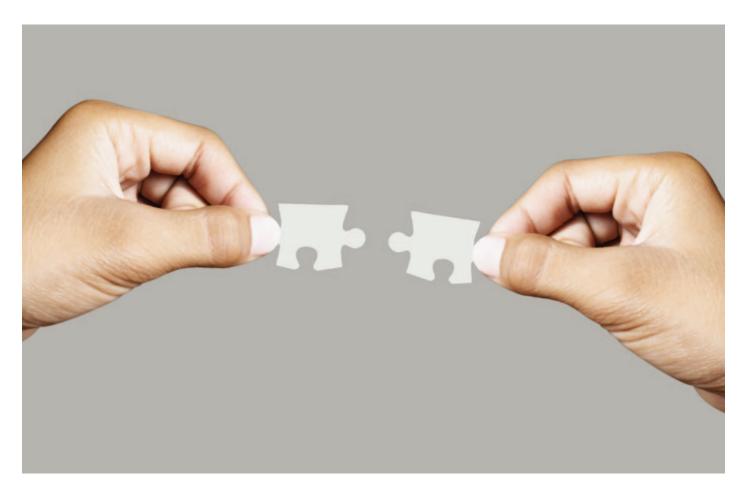
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# Grammatical misagreement in function:

Participial phrases (present, past)



## Introduction

he present participle using and the past participle based on, both traditionally adjectivals, ostensibly misfunction without a noun to modify (a modifee). The frequency of their usage and misusage in research writing justifies a separate article for analysis and revision.

# **Experimental sections**

Part 1 – Materials and Methods section: method

Example: Present participle

Ascorbic acid was determined colorimetrically <u>using</u> a,a-dipyridyl.

#### Revision

Ascorbic acid was determined colorimetrically **with** α,α-dipyridyl.

#### **Revision 2**

Ascorbic acid was determined colorimetrically **by using** a, a-dipyridyl.

# **Notes**

A participle dangles either before or after an independent clause without an obvious modifee. In the Example, because *ascorbic acid* is not using anything, the participle dangles. This dangling results from usage of the passive voice of the following active voice sentence: *Using a,a-dipyridyl, we colorimetrically determined ascorbic* 

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acid. However, it would be an unnecessary usage of the personal pronoun we in a Materials and Methods section, where we is a narrative focus on the agent rather than the thematic (ascorbic acid).

In Revision 1, the usage of the preposition *with* supports the hypothesis that *using* may function as a preposition, for which there seems no dictionary support.

In Revision 2, the preposition-gerund phrase

by using functions adverbially by structure and position (i.e., close to the verb phrase modifee was determined).

To require consistent usage of *by using* may seem a hypercorrection and pedantic, because *using* alone is so common. However, *by using* is unmistakably adverbial, whereas *using* is not.

# Part 2- Materials and Methods section: method

#### Example: Present participle

The emulsion was forced through a Lipex extruder (Lipex Biomembranes) containing polycarbonate membranes (Nucleopore) at a pressure of 300 PSI using argon gas.

#### Revision

The emulsion was forced (300 PSI, argon gas) through a Lipex extruder (Lipex Biomembranes) containing polycarbonate membranes (Nucleopore).

#### **Notes**

This Example is presented to include another type of revision of the adverbial *using*, namely syntactic reduction. In this Revision, the details of the gas used to force the emulsion through the extruder can be embedded as the noun phrase appositional secondary detail (300 PSI, argon gas). Such secondary detail is deemphasised (by length and parentheses) rather than being over-stated as the sentence-ending phrase *using argon gas*.

#### **Contextual Sections**

# Part 1 – Discussion section: research results consequence

## Example: Past participle

Based on this mechanism, <u>we</u> formulated a model that illustrates the dynamics of holographic grating formation.

#### Revision 1

Based on this mechanism, **a model was** formulated that illustrates the dynamics of holographic grating formation.

#### **Revision 2**

A mechanism-based **model was** formulated that illustrates the dynamics of holographic grating formation.

#### Notes

The participial phrase *based on this mechanism* traditionally functions adjectivally modifying a contiguous noun, which is not *we* in the Example, but *model*, as in Revision 1.

In Revision 1, there is a contiguous placement of modifier to modifiee by transformation into the passive voice *a model was formulated*, thereby resolving any apparent misfunction and eliminating the non-thematic focus on *we*.

In Revision 2, the orienting phrase and subject are melded as a test of modifier-modifee relation.

An adverbial equivalent of *based on* may be the

phrase on the basis of (or according to this mechanism) which as an adverbial prepositional phrase modifies formulated. Being adverbial, such modifiers need not be contiguous to their modifiee, but such contiguity would reinforce a structure-function pattern.

### Summary

Dissonance results from the adjectival and adverbial misfunction of using and based on. Revision options: the adjectival function of the present participle using and the past participle based on either can be transposed contiguously to a modifee or transformed to a decidedly adverbial form such as by using or replaced with an adverbial unit such as according to.

# **Experimental sections**

- Adverbial misfunction with a dangling present participial phrase: Ascorbic acid was determined colorimetrically <u>using</u> a,α-dipyridyl.
- Over statement of the sentence-ending phrase: The emulsion was forced through a Lipex extruder (Lipex Biomembranes) containing polycarbonate membranes (Nucleopore) at a pressure of 300 PSI using argon gas.

### **Contextual sections**

1. Adverbial misfunction with non-contiguous placement of modifier to modifiee: *Based on this mechanism*, <u>we formulated a model that describes the dynamics of holographic grating formation.</u>



