

# Helpful Hints for Technical Writing

## Avoid Dangling Participles

The participle is a certain form of a verb. Every verb (e.g., to control, to break) has both a present participle (e.g., controlling, breaking) and a past participle (e.g., controlled, broken). Besides serving to portray specific tenses of the verb (e.g., the wind is breaking the tree; the wind has broken the tree), participles can also serve as adjectives or adverbs (e.g., the broken tree). Other words can be combined with the participle to form participial phrases. These phrases, although consisting of several words, also serve as adverbs or adjectives in the same manner that single words do. In the foregoing sentence, "consisting of several words" is an adjective that modifies the noun "phrase".



Participial phrases can be a problem in technical writing, because they seem to be especially easy to use in a manner that is unclear, inexact, or ambiguous. When their meaning is not clear, they are said to dangle. If dangling participles are to be avoided, they must first be identified. This is not always easy. To be sure a participle does not dangle, the word it modifies must be perfectly clear. Here is an example of a sentence with a dangling participle:

Applying a rate of herbicide that was too low, the weeds were not controlled.

This participle modifies the performer, who is not even mentioned. To use the phrase so it does not dangle, the following rather clumsy sentence could be written:

The applicator, applying a rate of herbicide that was too low, did not control the weeds.

Because the applicator need not be mentioned, the sentence should remain in the passive voice and could be written in several ways:

The weeds were not controlled because the herbicide rate was too low.

The weeds were not controlled because not enough herbicide was applied.

The rate of herbicide applied was too low to control the weeds.

Here is another example in the passive voice:

The herbicide can be incorporated with a disk or rotary tiller, depending upon which is available.

The vague participle can be eliminated by rewriting the sentence:

The herbicide can be incorporated with a disk or rotary tiller, whichever is available.

The sentence would be better written:

The herbicide can be incorporated with either a disk or a rotary tiller.

Here is an example in the active voice:

After applying the herbicide, the leaves turned yellow.

Did the leaves apply the herbicide? The sentence should be written:

The leaves turned yellow after the herbicide was applied.

The following sentence has a dangler and is inappropriately written in the passive voice, because the performer is stated:

Having identified the weed species, a control program was recommended by the extension agent.

Did the control program identify the weed species? The sentence would be better written:

Having identified the weed species, the extension agent recommended a control program.

It could also be written:

The extension agent recommended a control program after he had identified the weed species.

Another example:

Having repaired the pump, the sprayer worked perfectly.

Did the sprayer repair the pump? This sentence could be written correctly in several ways:

After the pump was repaired, the sprayer worked perfectly.

After I repaired the pump, the sprayer worked perfectly.

The sprayer worked perfectly after the pump was repaired.

Sometimes dangling participles can present a meaning quite different from that intended, such as in the following example from a government questionnaire:

How many employees do you have, broken down by sex?

When used so they do not dangle, participial phrases are useful in technical writing. Here are good examples:

Lacking chlorophyll, the parasite cannot survive alone.

Vaporized during the delay before incorporation, the herbicide did not control the weeds.

The rule regarding participles is simple. Just be sure the descriptive words apply logically and clearly to the words they modify.

Remember:

When a dangling participle  
Is in our writing found,  
The paper will be hard to read;  
Its structure not be sound.

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