

A Guide To Verb Tense Voice And Mood In Scientific Writing

A. Present Tense

Use present tense:

1. To describe something that is happening now:

- **Appendix A summarizes the results of the survey.**

2. To describe published research, articles or books whose conclusions you believe are currently valid and relevant. It doesn't matter whether the publication is recent or centuries old:

- **Malone (2003) discusses nursing care in the context of nested proximities.**
- **In her *Notes on Nursing* (1860), Florence Nightingale includes practices for cleanliness and observation of the sick.**

3. To indicate a general truth or fact, a general law, or a conclusion supported by research results. In other words, something that is believed to be always true:

- **The provincial government regulates the delivery of health care. [fact]**
- **For every action there is an equal and opposite reaction. [law]**
- **Our results demonstrate that cimetidine can improve mean fat absorption in adolescents with cystic fibrosis. [conclusion]**

4. To describe an apparatus (because it always works the same way):

- **This temperature gauge gives an accurate reading in all weather conditions.**

5. To state research objectives: [note: past tense is also commonly used]

- **The purpose of this study is to examine imagery use by elite athletes.**

B. Simple Past Tense

Use simple past tense:

1. To describe something that began and ended in the past, e.g., the Methods or Results sections of a research report:

- **We administered four doses daily to 27 participants for 14 days.**
- **The transgenic plants showed up to eight-fold PAL activity compared to control.**

2. To describe previous work on which the current work is based:
 - **Smith et al.’s (2005) study collected data on the drug’s effect in a pediatric population similar to ours.**
3. To describe a fact, law, or finding that is no longer considered valid and relevant:
 - **Nineteenth-century physicians held that women got migraines because they were “the weaker sex,” but current research shows that the causes of migraine are unrelated to gender.**
Note the shift here from past tense (discredited belief) to present (current belief).
4. To state research objectives: [note: present tense is also commonly used]
 - **The purpose of this study was to examine imagery use by elite athletes.**

C. Perfect Tense

This tense is formed with the auxiliary [“helping”] verb **have** plus the main verb:

1. Use a **present perfect tense** to describe something that began in the past and continues to the present:
 - **Hassanpour has studied the effects of radiation treatment since 1982.** [and still does]
 - **Researchers have demonstrated a close link between smoking and morbidity rates.**
2. Use a **past perfect tense** to describe an action completed in the past before a specific past time:
 - **Nightingale had begun her reforms of nursing practice prior to the Crimean War.**

D. Future Tense

Use future tense in outlines, proposals, and descriptions of future work:

- **The proposed study will examine the effects of a new dosing regimen. Twenty-seven participants will receive four doses daily for 14 days.**

E. Progressive Tense

Use a progressive tense for an action or condition that began at some past time and is continuing now. It is formed from the auxiliary verb **be** plus a present participle. A progressive form emphasizes the continuing nature of the action:

- **I am collecting data from three sites this month.**

In places where conciseness is important (such as an abstract), it is often possible to use a simple verb form instead:

- With this new method, we are attempting to demonstrate....
- With this new method, we attempt to demonstrate....

F. Active and Passive Voice

Active (direct) voice: The normal pattern of English sentences is subject—verb—object, which we call active voice:

- Southern analysis indicated a single site of insertion.

Passive (indirect) voice reverses the order (object—verb—subject). Passive voice is constructed by using a form of the verb **be** followed by a past participle (-**ed**). The phrase “by [the subject]” is included or implied:

- A single site of insertion was indicated by Southern analysis.
- Southern analysis was performed [by us] and a single site of insertion was indicated [by the analysis].

Use passive voice:

1. to de-emphasize the subject in favour of what has been done:

- Red or blue outfits were randomly assigned to competitors in four elite sports.

2. to discuss background that exists as part of the body of knowledge of the discipline, independent of the current author:

- Colour is thought to influence human mood, emotions and expressed aggression.

As a general principle, use active voice in preference to passive. It is both more direct and more concise:

- Chen performed the experiment in 2006.
- The experiment was performed by Chen in 2006.

G. Modal Verbs

Modal verbs are a type of auxiliary or “helping” verb. Auxiliary verbs help complete the form and meaning of main verbs. The principal modal verbs are **can**, **could**, **may**, **might**, **must**, **should**, and **would**. They combine with main verbs to express meanings such as ability, possibility, permission, obligation, and necessity:

- Cimetidine can improve mean fat absorption in adolescents with cystic fibrosis. [ability, present tense]
- At first the phlebotomist could not locate the vein. [ability, past tense]

- We think we may receive more funding for our study. [possibility, present tense]
- We thought we might receive more funding for our study. [possibility, past tense]
- Scientists may perform experiments on human subjects only with ethics approval. [permission. Note: can has become almost interchangeable with may to indicate permission, especially in North America.]
- We must replicate their experiment prior to testing our own method. [necessity]
- We should seek ethics approval before advertising for participants. [obligation]
- Studying these organisms would provide insight into their protective mechanisms. [possibility]

H. Mood

Mood is the form of a verb that shows whether the act or state expressed is thought of as a fact, a command, or a possibility or wish:

1. Indicative mood (stating a fact): Most English sentences are in indicative mood.

- The depletion of ATP results in a loss of ionic gradients.

2. Imperative mood (giving a command): Imperative mood is widely used in scientific and technical writing for instructions.

- Decrease ion permeability by reducing the conductance of individual ion channels.

3. Subjunctive mood (expressing a possibility or wish): The subjunctive mood has almost disappeared from North American English. However, . . .

a. Subjunctive mood is used in scientific writing to make recommendations. To form the subjunctive mood in these examples, the third-person singular loses its "s":

- Indicative: Currently the case manager acts as a liaison with the new agency.
- Subjunctive: The independent report recommends that the social worker act as a liaison with the new agency. [expresses the *wish* of the report's authors, and the *possibility* that certain actions may result]

To form the subjunctive in these next examples, the indicative forms of the verb **be** (*am, are, is*) change to **be**:

- Indicative: Currently, supplemental pancreatic enzymes are administered to adolescents with cystic fibrosis to improve mean fat absorption.
- Subjunctive: This study recommends that cimetidine be administered to adolescents with cystic fibrosis to improve mean fat absorption.

b. Subjunctive mood is used in scientific writing to express demands and requirements:

- Current policy requires that nurses be baccalaureate-prepared.

I. How to Use Verbs Strategically

Remember these key points:

- All writing is persuasive;
- Writers use language strategically to persuade their readers;
- Verbs play an important role in the strategic moves made by writers.

We accomplish our persuasive purpose through

1. strategic choice of verbs;
2. strategic shifts in verb tense, voice and mood.

Case A: The final sentence of a graduate student application for renewal of funding:

- To date, I have mastered the fundamental techniques in basic immunology and basic molecular biology that are required to answer my research questions, and look forward to exciting results in the near future.

1. The verbs are strategically chosen to convey the writer's command of the subject (**master**), the necessity of the work to date (**require**), and a sense of forward movement (**look forward**). They are powerful word choices that engender an air of excitement. The verbs persuade the funding committee to think positively of the writer's research.

2. The present perfect tense (**have mastered**) emphasizes the writer's continuous hard work until now. The shift to present tense (**are required, look forward**) strengthens the message that the writer's work fills both present and future needs.

Case B: Two sentences from the introduction to a literature review:

- Early studies in the area all failed to distinguish between cell depolarization and loss of ionic gradients, and thus their conclusions are suspect. Later studies have corrected this flaw and will be the focus of the review that follows.

1. The verbs are strategically chosen to convey the fatal flaws of early studies (**failed**), the writer's rejection of their findings (**are suspect**), the strength of more recent studies (**have corrected**), and the intention of the writer to focus on them (**will be...follows**).

2. The simple past tense (**failed**) followed by the present (**are**) emphasizes that the early findings are today not valid. The shift to present perfect (**have corrected**) emphasizes the length of time researchers have studied the problem, signaling that it is worthy of study. The final shift, to future (**will be**) and present (**follows**), signals the arrival of the body of the review.