

Accessibility of Online Based Material for Persons with Deafness

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Design of Online Material

Consideration should be given
for the special needs and
limitations of persons who are
deaf or hard-of-hearing.

Six Guidelines for Accessibility

1. Provide text equivalents of auditory content.
2. Provide non-text equivalents for text.
3. Avoid false perception of sound.
4. Provide context and orientation information.
5. Use clear and simple language.
6. Provide clear navigation mechanisms.

Introduction to Issues of Accessibility

- 54 million Americans live with some type of physical or mental disability.
- The Internet has opened up a world of information to persons with a disability.
- Accessibility to this information is a critical issue.

Introduction to Issues of Accessibility (cont.)

- Persons with a disability are less likely to use the Internet.
- Although improving, there is low rate of accessibility.
- Less than 20% of Fortune 100 companies' home pages are fully accessible.
- Accessibility guidelines are needed

Accessibility Guidelines

- World Wide Web Consortium (W3C) Accessibility Guidelines

Promotes the technological evolution of the Internet while making it available to persons around the world.

- Section 508 Checklist

Requires all Federal agencies to make their electronic information accessible to persons with disabilities.

Accessibility Guidelines (cont.)

- W3C Guidelines and Section 508 primarily focus on the visuals.
- The Internet is primarily a visual medium.
- Guidelines are needed for people who are deaf or hard-of-hearing.

Guideline 1

Provide text equivalents of auditory content.

- Closed Captions
Must be turned on by viewer
- Open Captions
Always visible and cannot be turned off
- Transcripts
Unsynchronized text

Guideline 1

Provide text equivalents of auditory content. (cont.)

- Either open or closed captions should be used.
- Transcripts may be used as a supplement.
- Sound effects should also be included in captions and transcripts.

Guideline 2

Provide non-text equivalents for text.

- Reliance on English text may put many deaf viewers at a disadvantage.
- Many persons with deafness have weaker reading and comprehension characteristics.
- English is not the first language for many in the deaf community.

Guideline 2

Provide non-text equivalents for text. (cont.)

- Avoid using large blocks of text and complex terminology.
- Supplement text with descriptive images or video.
- Possible use of sign language videos or signing avatars.

Guideline 3

Avoid the false perception of sound.

- False perception of sound.
Occurs when the user is unaware of the presence of sound.
- False-positive perception of sound.
Occurs when the user believes there may be sound when there is none.

Guideline 3

Avoid the false perception of sound. (cont.)

- Provide visual clues of the presence of sound.
- Multimedia presentations should include a speaker icon or a volume control.

Guideline 4

Provide context and orientation information.

- Divide large blocks of text into smaller groups that can be easily and quickly understood.
- Use good technical writing characteristics.
 - Headings & Sub-headings
 - Lists & Tables
 - Charts & Graphs
 - Contextual Graphics

Guideline 5

Use clear and simple language.

- Lower computer usage among the deaf can be linked to difficulty with the language.
- Make English simple, but not dry and child-like.
- Balance stylistic writing with simple English.

Syntax Guideline 1

Limit sentences to two main verbs, except when joined by *and, but, & or*.

Example:

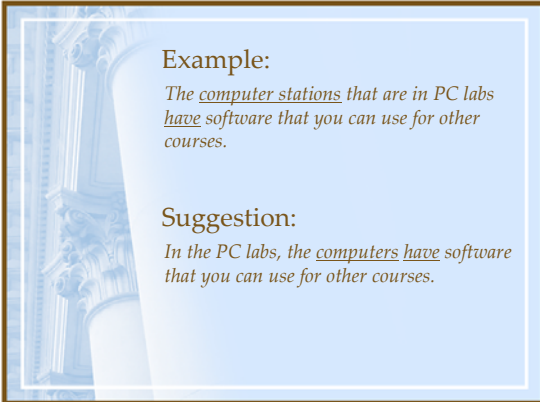
When he finished working on his project, the student expressed an interest in expanding his project by adding a two-car garage and a workshop.

Suggestion:

When the student finished working on his project, he was interested in expanding his project. He wanted to add a two-car garage and a workshop.

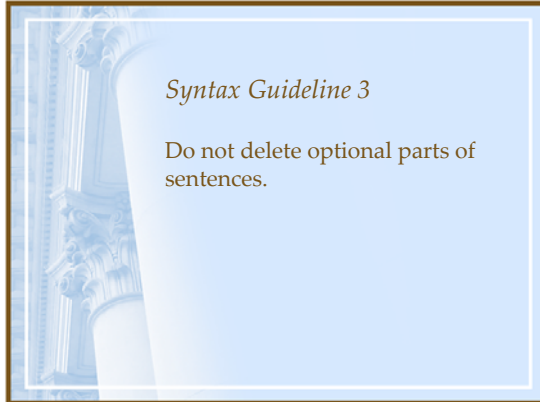
Syntax Guideline 2

Do not separate a subject from its verb.



Example:
The computer stations that are in PC labs have software that you can use for other courses.

Suggestion:
In the PC labs, the computers have software that you can use for other courses.



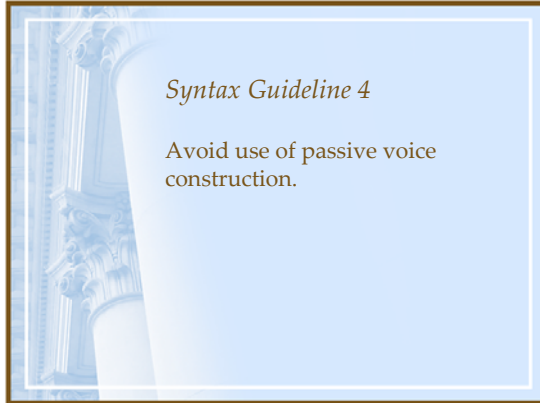
Syntax Guideline 3

Do not delete optional parts of sentences.



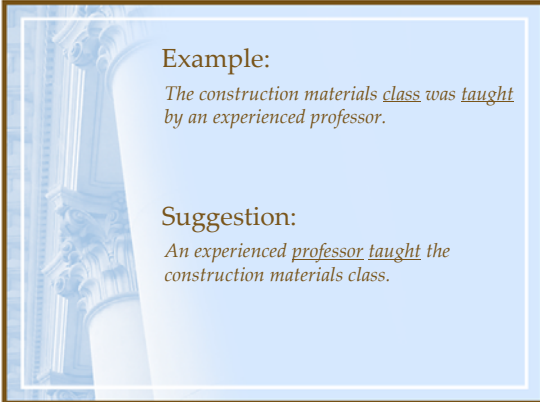
Example:
You must have your acceptance letter before registering for classes.

Suggestion:
You must have your acceptance letter before you can register for classes.



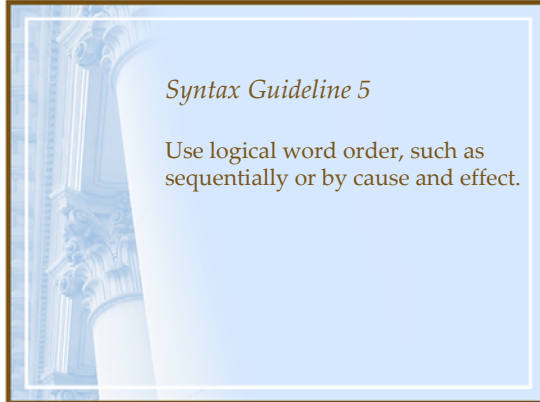
Syntax Guideline 4

Avoid use of passive voice construction.




Example:
The construction materials class was taught by an experienced professor.

Suggestion:
An experienced professor taught the construction materials class.



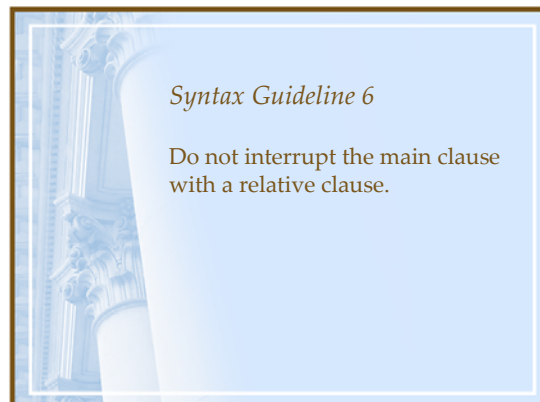
Syntax Guideline 5

Use logical word order, such as sequentially or by cause and effect.



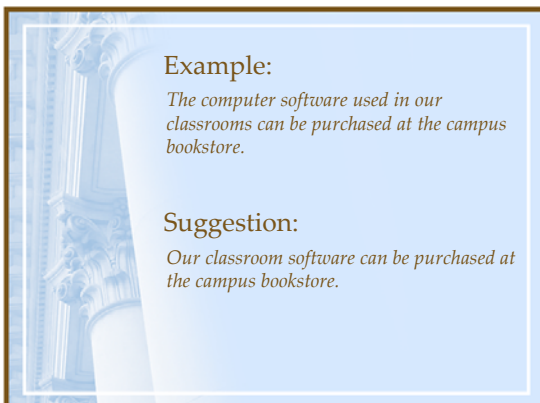
Example:
We will send you an application when you return the reply card.

Suggestion:
When you return the reply card, we will send you an application.



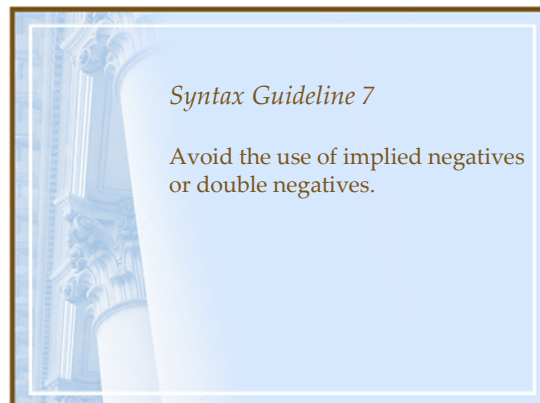
Syntax Guideline 6

Do not interrupt the main clause with a relative clause.



Example:
The computer software used in our classrooms can be purchased at the campus bookstore.

Suggestion:
Our classroom software can be purchased at the campus bookstore.



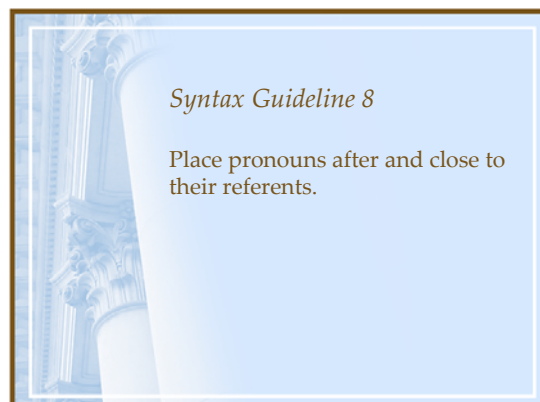
Syntax Guideline 7

Avoid the use of implied negatives or double negatives.



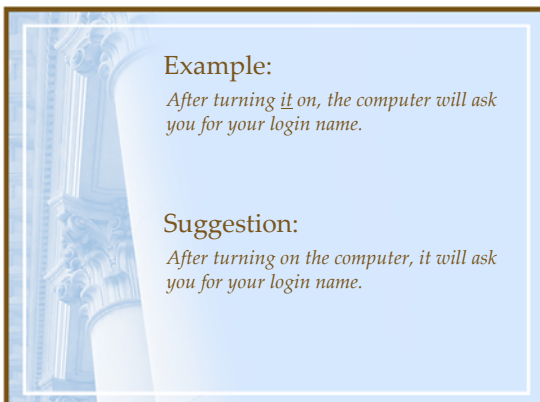
Example:
We seldom turn down students who have good drafting experience.

Suggestion:
We almost always accept students with good drafting experience.



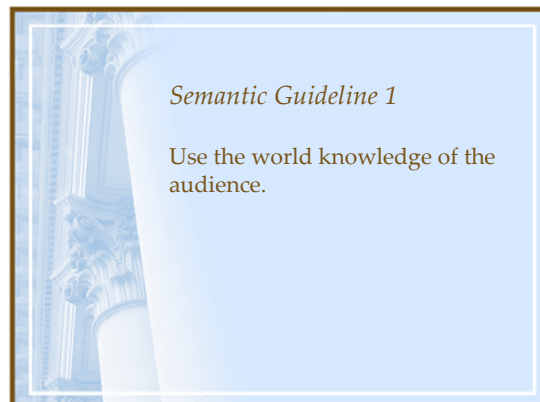
Syntax Guideline 8

Place pronouns after and close to their referents.



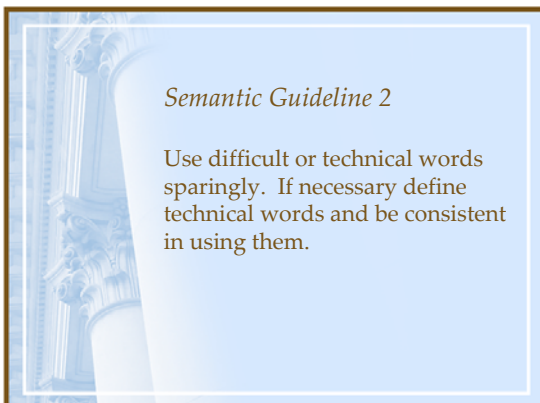
Example:
After turning it on, the computer will ask you for your login name.

Suggestion:
After turning on the computer, it will ask you for your login name.



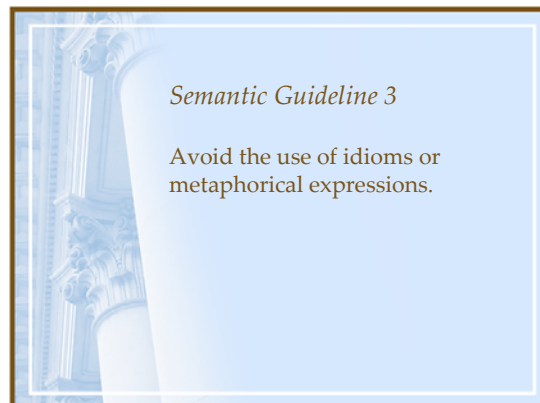
Semantic Guideline 1

Use the world knowledge of the audience.



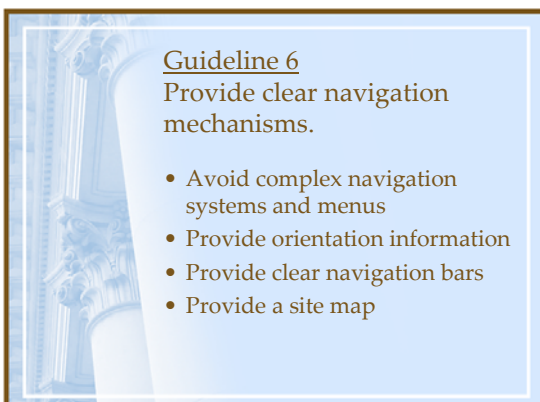
Semantic Guideline 2

Use difficult or technical words sparingly. If necessary define technical words and be consistent in using them.



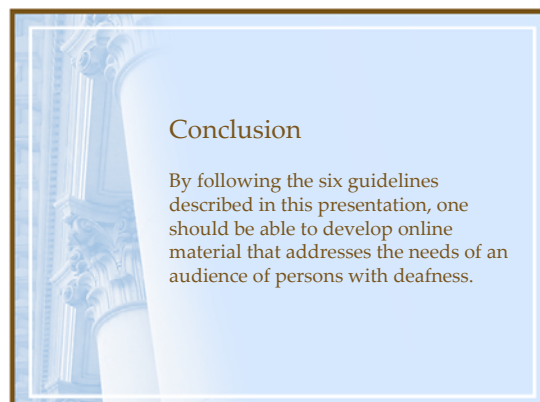
Semantic Guideline 3

Avoid the use of idioms or metaphorical expressions.



Guideline 6
Provide clear navigation mechanisms.

- Avoid complex navigation systems and menus
- Provide orientation information
- Provide clear navigation bars
- Provide a site map



Conclusion

By following the six guidelines described in this presentation, one should be able to develop online material that addresses the needs of an audience of persons with deafness.