

Writing for the Disadvantaged Reader

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Advice for technical communicators who write for disadvantaged readers including:

- ❖ Non-native speakers of English including:
 - non-native-speaking engineers,
- ❖ Persons who became deaf before learning the language of their environment—prelingually deaf,
- ❖ Persons with reading disorders including:
 - alexia = inability to recognize words
 - aphasia = inability to understand words
 - dyslexia = inability to derive meaning from words
 - schizophrenia = a mental disorder where a division of the mind results in hallucinations and delusions, sometimes affecting reading ability

A Little Background

- ❖ Vision is necessary for reading, however, blind persons typically are able to read using equipment that changes print into sound—**this progression does not discuss the blind.**
- ❖ Modern writing systems are only partially visual systems. They are based on auditory language and efficient decoding of print requires *mental* conversion into sound—usually an unconscious act for native readers of a language. *Have you ever noticed how saying a sentence out loud helps you understand it?*
- ❖ Reading engineering drawings is quite different where juxtaposition of mnemonic symbols conveys meaning. Engineering drawings are basically understood by engineers throughout the world except for the language placed on them.
- ❖ Research shows that readers first decode the symbols and then attach meaning to them. Thus, readers must have some system of decoding print symbols and then some system of assigning meaning—a 2-step process.

A Little Grammar Lesson

Syntax—that part of grammar that conveys meaning through placement of words (permutation coding), function words and use of bound and unbound morphemes. Syntax varies with languages, e.g.,

- ◆ *La porte rouge* = the door red
- ◆ *The red door*

English and most other languages use bound and unbound morphemes, e.g., **A** machine works 24-hours **a** day, but **a** horse works less.

A = unbound morph, **-s** = bound morph, but = func't word



Simple Sentence Structures

- ❖ Subject+verb+object (S+ transitive V + O)
 - ◆ Josephine uses computers. (S+V+O)
- ❖ Subject+verb (S+ intransitive V)
 - ◆ Edward works. (S+V)
- ❖ Subject+linking verb+object (S+ linking V + O)
 - ◆ He is old. (S+V+ adjective complement)
 - ◆ She is an engineer
 - (S + V+ noun phrase complement)

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Complex Sentences

❖ Compound Clause Sentences:

- ◆ Ed works and he relaxes too.
- ◆ He replaces major components, but [he] does not replace integrated circuits.
- ◆ Neither he nor Jo have Microsoft™ certification.

❖ Adverbial Clause Sentences:

- ◆ If he has a need, he will seek advice.
- ◆ He reads the procedure while she performs it.
- ◆ They work well as a team when procedures are complex as well as when they are simple.

❖ Relative Clause Sentences:

- ◆ The schedule program that I borrowed from the XYZ Corporation is very comprehensive.
- ◆ It is a routine whose calculations are effective.

❖ Complement Clause Sentences:

- ◆ The electric generator is connected to the circuit that provides power in a storm emergency.
- ◆ It provides power that is essential for a facility.

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Function Words

- ❖ Articles [*a, an, the* and null]
- ❖ Conjunctions
 - ◆ Coordinating: and, but, or
 - ◆ Correlating: either-or, neither-nor
 - ◆ Subordinating: before, if, since, when, etc.
- ❖ Prepositions: at, in, of, near, on, under, etc.
- ❖ Conjunctions
 - ◆ Coordinating: and, but, or
 - ◆ Correlating: either-or, neither-nor
 - ◆ Subordinating: before, if, since, when, etc.

Augmenters

- ❖ Adjectives: The *old blue* computer was *compatible* in a *new* mode.
- ❖ Adverbs: *Often* Ed *really* works *very, very diligently* and *very well*.

{NOTE: Adverbs modify verbs, adjectives **and** other adverbs.}

- ❖ : **Prepositional Phrases:** On Mondays, Jo uses computers in the laboratory at her desk with little direction from her superior in the modern factory.

**Eight Suggested Techniques for
Communicating with Reading
Disadvantaged Readers**

1. Maintain the subject and verb in close proximity.
2. Limit the number of clauses and words.
3. Include optional [elliptical] words.
4. Place words in logical order.
5. Use simple words.
6. Explain words in text.
7. Avoid slang, metaphors and Jargon.
8. Avoid nominalization of verbs.

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Suggested Techniques for Communicating**

**Maintain the subject and verb in
close proximity.**

*The information stored in one of three pages
[subject { ... relative clause ... }]
will appear on the computer screen.
[verb phrase][prep. phrase complement]*

Some persons may expect three pages on the computer screen. Compare with: *Information will appear on the computer screen. It (or the information) may be on any one of the three pages.*

*Page 2, Part I, between pages 1 and 3, must be replaced.
[... subject ...][prepositional phrase][...verb phrase ...]*

Some persons may interpret this to mean that pages 1 and 3 should be replaced. Compare: *Page 2 must be replaced; it is between pages 1 and 3.*

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Suggested Techniques for Communicating

Limit the Number of Clauses and Words in Sentences

Recommendation: Average 15 words per sentence and two clauses. *The New York Times* averages 26 ± 2 words per sentence.

Recommendation: Limit sentences to two clauses except when joined by a coordinating conjunction, e.g., *and*, *but*.

Include Optional Words in Sentences

You should test the hard-drive before installation.

You should test the hard-drive before you install it.

Place Words in Logical Order

Before you close the door, insert the disk.

Insert the disk before you close the door.

The “go to page” window appears when you depress F5.

Depress the F5 key to open the “go to page” window.

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Use Simple Words

SUGGESTED WORD SUBSTITUTIONS

COMPLEX WORD	SIMPLE WORD	COMPLEX WORD	SIMPLE WORD
accelerate	speed	discern	detect, understand
admonish	warn	epitome	example of, best
alacrity	promptness, willingness	exhibit	show
alleviate	Relieve	genesis	origin
amenable	Willing	habitat	home
anecdote	story, account	impotent	weak
broach	ask	luminary	important person
cavernous	large	malevolence	bad intent
cease	stop	muscular	strong
Charlatan	cheat, fraud	observe	watch
circumlocution	wordiness	utilize	use

“Synonyms are good servants, but bad masters; therefore select them with care.” P. M. Roget

Malcolm: Writing for the Disadvantaged Reader Suggested Techniques for Communicating

Explain Words in Context

- ❖ **Parenthetic:** *The type of default option (the print normally used in the template unless you intentionally change it.) may be changed by ...*
- ❖ **“That is”:** *The house curb appeal, i.e., how a house looks from the street, is important to the eventual ...*
- ❖ **Defined:** *The perimeter of a 100 by 100-foot square area is 400 feet.*
- ❖ **Similes:** *Like most other radio equipment, a cell phone does not work well in all locations.*

Avoid Slang, Metaphor and Jargon

- ❖ **Slang:** *The new XYZ software is really cool.*
- ❖ **Metaphor:** *The green worker wore a red dress.*
- ❖ **Jargon:** *Ed’s monster cables really bounce.*

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Avoid Nominalization of Verbs

The device is used for the detection of small signals.
noun

The device detects small signals.
verb

The screen is utilized for the display of the test results.
noun

The screen displays the test results.
verb

They performed the installation of the new equipment.
noun

They installed the new equipment.
verb
