

TECHNICAL WRITING BASICS

Heather Stone, CLEAR Instructor

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EVER FEEL LIKE WRITING ISN'T YOUR THING?

I'm an
~~Engeneer~~
~~Enginere~~
~~Engenere~~
I'm good
with math

science.memebase.com

EMPLOYERS REQUEST COMMUNICATION SKILLS

- Technical writing (2nd)
- Public speaking (4th)
- Working with individuals (6th)
- Working with groups (7th)
- Talking with people (9th)

5 of the top 10 skills relate to communication.

*Source: American Society for
Engineering Education (ASEE) survey*

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EVERYBODY WRITES, EVERYBODY SPEAKS

25% of a working engineer's time is spent in the reporting process.

Source: Nicholas Engineering Education

40% of engineering job postings list "excellent communication skills" as an essential qualification.

Source: careerbuilder.com survey 10/09

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ANYBODY CAN LEARN TO WRITE

- Word choice
- Sentence structure
- Punctuation

Learn the basics . . .

Look up the rest!



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WORD MIX-UPS

their, there, they're

accept, except

to, two, too

alternatively, alternately

complement, compliment

discreet, discrete

it's, its

your, you're



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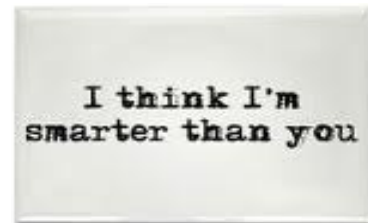
BIG WORDS IMPRESS PEOPLE: YES . . . BUT

Yes

- May show formality or technical expertise

But

- Distance you from readers
- May be misunderstood
- May make you look foolish



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USE FAMILIAR WORDS

- Words most people know
- Words that best convey your meaning
- Shorter, more common words
- Specific, concrete words



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SHORT, SIMPLE ALTERNATIVES

Stuffy

reside

commence

enumerate

finalize

utilize

Simple

live

begin

list

finish, complete

use

ACTIVE VERSUS PASSIVE VERBS

Active—subject of sentence does action the verb describes

Passive—subject is acted upon

- Usually includes form of “to be”
- Change to active if you can
- Direct object becomes subject

ACTIVE VERB EXAMPLES

P: The program will be implemented by the agencies.

A: The agencies will implement the program.

P: These benefits are received by you.

A: You receive these benefits.

P: A video was ordered.

A: The customer ordered a video.

POWER VERBS

Replace phrase with a verb:

<i>make an adjustment</i>	= adjust
<i>make a decision</i>	= decide
<i>perform an examination</i>	= examine
<i>take into consideration</i>	= consider

ERASE WORDS THAT SAY NOTHING



Delete words if idea is clear without

- *period of three months*
- *at the present time*

Replace wordy phrase with one word

- *Ideally, it would be best to put the . . .*
- If possible, put the . . .
- *There are three reasons for our success . . .*
- Three reasons explain our . . .

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PARALLEL STRUCTURE

During the interview, job candidates will

- *Take a skills test.*
- *The supervisor will interview the prospective employee.*
- *A meeting with recently hired workers will be held.*

faulty

During the interview, job candidates will

- Take a skills test.
- Interview with the supervisor.
- Meet with recently hired workers.

parallel

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COMPLETE SENTENCES

Often computer users run out of USB ports or have a big clutter of computer cables on their desk, this can be a big inconvenience for people that have their computer as work and entertainment apparatus.



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AVOID FRAGMENTS

The shortcomings are overcome by thinking about these issues. By creating a better project.

This project outlines reasons why code should be written to a standard. Clearer that way.



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SUBJECT/PRONOUN AGREEMENT

It takes some knowledge of plumbing for **someone** to install it **themselves**.

Which **customer** is missing **their** luggage?

The **interpreter** can choose to transmit **their** translation of speeches or comments to their target group, or to the other translators.



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TENSE CONSISTENCY

The basic design **was** a box large enough to hold a 2 liter bottle, a pen laser, and a 90 degree sensor. A photodiode **is** connected to the data acquisition system. The system **will be** powered externally.



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COMMAS

When another zone requests airflow the heating or cooling unit will start up again.

You don't have to plug it in and it will not be left behind when you leave.

Good projects should include a design specification, a prototype and a project plan.

POSSESSIVE VERSUS PLURAL

Apostrophe S ('s) means ownership

- *Get John's equipment from the closet.*
- *Sally's project is the most complex.*

S with no apostrophe means plural (more than one)

- *John has several tools we need.*
- *Three friends are coming over tonight.*

OTHER COMMON PROBLEMS

Punctuate inside quote marks, except colon and semi-colon

Use the word “mechanical.”

Uses of the word “mechanical”: xxx, xxx, xxx.

Punctuation inside parenthesis or outside, depending

Two complete sentences get a semi-colon, not a comma

“Data” is plural not singular

An Engineering Student's Life

In class: $1+1=2$

Homework: $1+2+2+1=6$

EXAM: JOHN HAS 4 APPLES. HE ATE ONE APPLE AND HE GAVE ONE APPLE TO HIS FRIEND.
CALCULATE THE VOLUME OF THE SUN.

