



**Support for English
Technical Writing By Non-
Native Speakers
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acrolinx IQ System

Quality Assurance for Technical Documentation

Goals of QA for Technical Documentation ◀

- ▶ Correctness of spelling and grammar
- ▶ Better comprehension
- ▶ Readability
- ▶ Consistency
- ▶ Translatability
- ▶ Corporate Wording

Levels of Quality Assurance ◀

- ▶ Spelling
- ▶ Grammar
- ▶ Style
- ▶ Terminology
- ▶ Consistent Phrasing

Spelling

Spelling: General, but also specific ◀

- ▶ Spelling underlies the same rules for all writers of English
- ▶ **BUT**
 - ▶ Different variants of English (UK – US)
 - ▶ Different spelling errors are prominent in different domains
 - ▶ Different spelling errors are prominent for authors of different native languages

Spelling for authors of Japanese native language ◀

- ▶ Some examples found in English technical documentation written by Japanese native speakers:
 - ▶ *accumulable*
 - Problem: Derivation system in English is complex
 - ▶ *signalling*
 - ▶ *travelled*
 - Problem: US English, UK English
 - ▶ *accurary* → *accuracy*
 - ▶ *nealy* → *nearly*
 - Problem: Japanese language has no “r”-sound

Spelling for authors of Japanese native language ◀

▶ *Fanctions*

▶ *alart*

▶ *currect*

→ Problem: Confusion of letters, often vowels.

→ Different writing system, sound-to-writing underlies a different concept. Vowels and their sound are not 1:1, as it is mostly in Japanese.

▶ *Releaseing*

▶ *allocatead*

→ Problem: Addition of letters.

→ When transferring English words to Katakana, vowels have to be added.

Spelling for authors of Japanese native language ◀

▶ *funciton*

▶ *writign*

→ Problem: Sequence of letters.

→ Several letter sequences that occur in English do not occur in Japanese.

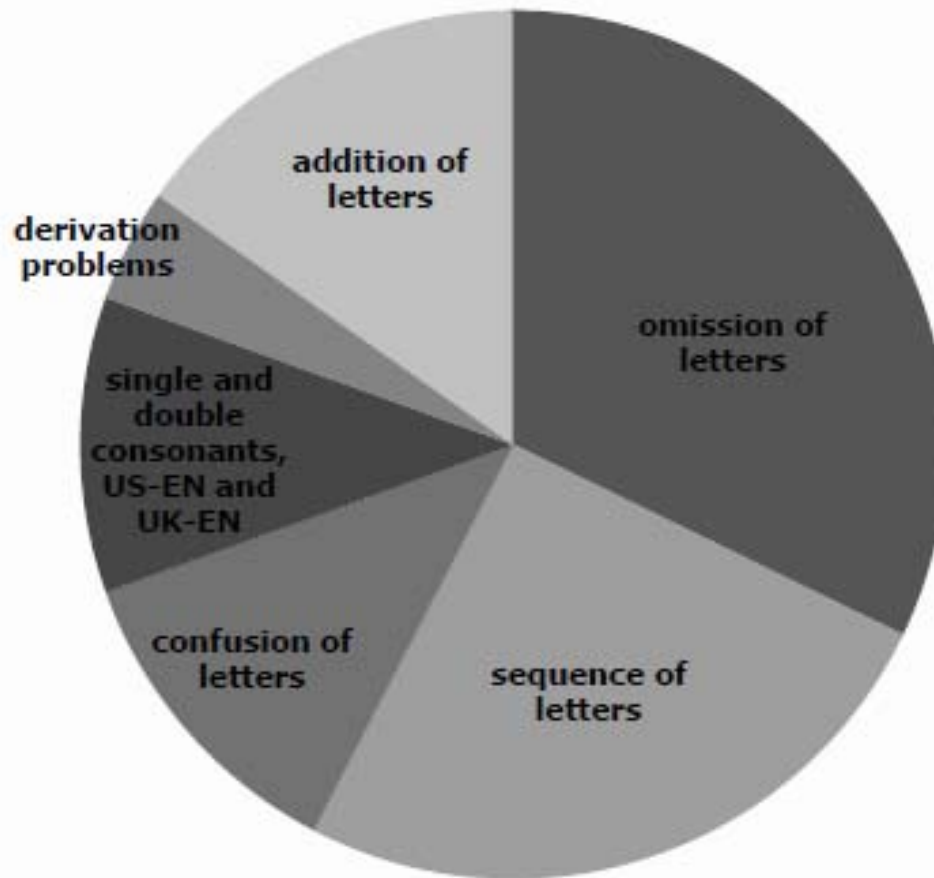
▶ *characer*

▶ *installtion*

→ Problem: Omission of letters.

→ Different sound-to-writing system

Spelling errors of Japanese authors writing English ◀



What can an author do about it? ◀

- ▶ Be clear about which variant of English you want to write in
- ▶ Use a spell checker
- ▶ Before using a spell checker, make sure that it is adapted to your needs
 - ▶ To the text type of technical documentation
 - ▶ To the domain you are writing documents for
 - ▶ To your native language

Grammar

Grammar: General, but also specific ◀

- ▶ Grammar rules are the same for all writers, BUT:
- ▶ Some grammar errors are more likely to be made by speakers of some native languages

Grammar errors of Japanese native speakers: Agreement ◀

- ▶ Number Agreement:
 - ▶ Be sure to supply power to a control and **an** expansion **units** from a single power supply.
 - ▶ It can be used as **a** master unit/slave **units**.
 - ▶ Always replace them with **a** new **ones**.
 - ▶ Problem: No number information in Japanese

Grammar errors of Japanese native speakers: Agreement ◀

- ▶ Subject Verb Agreement:
 - ▶ Check if instructions are programmed in such a way that a **scan** never **finish**.
 - ▶ When the **operations is** completed, the return to home completes.
 - ▶ Problem: Different concept of subject-verb agreement in Japanese

Grammar errors of Japanese native speakers: Determiners ◀

- ▶ a an distinction
- ▶ Examples:
 - ▶ The User Password entered is stored in **the your** PC by the password control function of the web browser.
 - ▶ Move **the both** guides
 - ▶ **No any** limitation
- ▶ Problem: The concept of sounds and letters, the concept of using determiners

Grammar errors of Japanese native speakers: Verb forms ◀

- ▶ Wrong verb form:
- ▶ Examples:
 - ▶ it **cannot communicates** with them
 - ▶ IP **can** be automatically **get**
- ▶ Problem:
 - ▶ Japanese verbs do not inflect to number, English irregular verbs

Grammar errors of Japanese native speakers: Incorrect word usage ◀

- ▶ affect, effect, impact:
 - ▶ **Affect** is generally used as a verb, meaning *to influence*.
 - ▶ **Effect** is most frequently used as a noun to express a result or change.
 - ▶ **Impact** is often mistakenly used as a verb. Use impact as a noun to express a strong effect.
- ▶ Example:
 - ▶ the actual use for preventing the **affect** of vibrations
 - ▶ such determination shall not **effect** the remaining parts of this agreement
- ▶ Problem:
 - ▶ Deep understanding of the meaning of words (non-native problem, generally)

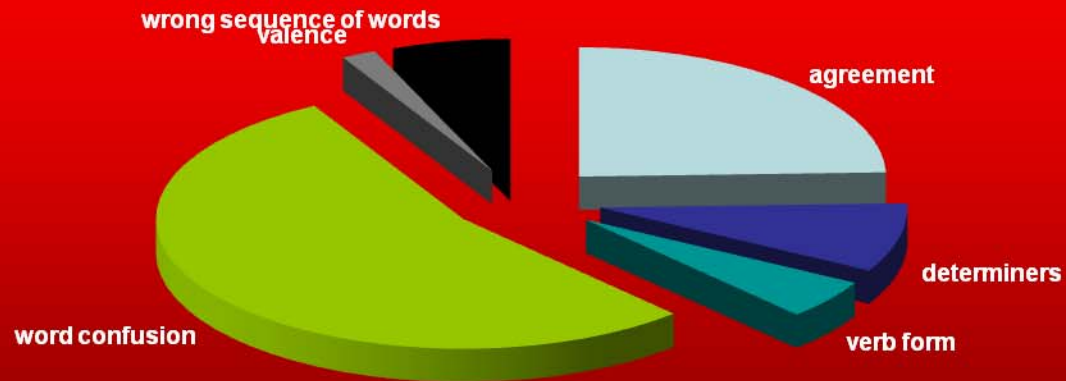
Grammar errors of Japanese native speakers: Incorrect word usage ◀

- ▶ amount number confusion:
 - ▶ **Amount** refers to total quantity. It modifies nouns that cannot be counted.
 - ▶ **Number** measures number or quantity. It modifies nouns that can be counted.
- ▶ Examples:
 - ▶ number of simultaneous input
 - ▶ number of connection is one
 - ▶ amount of details
- ▶ Problem:
 - ▶ Japanese does not contain a differentiation between countable and uncountable nouns.

Grammar errors of Japanese native speakers: Valence ◀

- ▶ use verb with object and to
 - ▶ Some verbs have the structure verb + object + infinitive: Examples are: advise, allow, enable, encourage, forbid, force, instruct, invite, order, remind, persuade, show, teach, tell, and warn.
- ▶ Examples:
 - ▶ It also **enables to transfer** the programs.
 - ▶ Using this function **enables to take** samplings
- ▶ Problem: In Japanese, it is completely correct to leave out Subjects and Objects. This is different in English, where verbal arguments are often obligatory.

Some Numbers from techdoc corpora, analyzed with acrolinx ◀



agreement	94
determiners (grammar)	33
verb form	19
word confusion	207
valence	7
wrong sequence of words	24
superlative form	3

Grammar mistakes in J-English and US-English ◀

rule category	Japanese English	Native English
word confusion	53,82%	61,2%
agreement	24,44%	7,65%
determiners (grammar)	8,58%	12,75%
wrong sequence of words	6,24%	10,2%
verb form	4,94%	8,5%
valence	1,82%	0%
superlative form	0,78%	0%

What can Japanese authors do? ◀

- ▶ Understand the specific issues that they have as non-native speakers because of the structure of the Japanese language
- ▶ Use a grammar checker that is adapted to
 - ▶ The language of technical documentation
 - ▶ The language of the domain you are writing for
 - ▶ Grammar issues in your native language

Style

- ▶ Style guidelines can be different for different usages
 - ▶ Text type (e.g., press release – technical documentation)
 - ▶ Domain (e.g., software – machines)
 - ▶ Readers (e.g., end users – service personnel)
 - ▶ Authors (e.g., Germans tend to write long sentences)

Best Practices for Corporate Style ◀

▶ CLARITY

- Simplicity of language
- Readability and translatability
- Punctuation

▶ CONSISTENCY

▶ CORRECTNESS

▶ TONE

CLARITY: Simplicity of language ◀

▶ *Limit the length of sentences*

- ▶ *The Administrator of the machine should exit from the current mode to return to the basic screen whenever the access to that mode is completed or if he or she leaves the machine with the mode screen left displayed.*

CLARITY: Readability and translatability ◀

- ▶ *Use the imperative*
Use the imperative whenever possible (especially in procedures).
- ▶ Examples:
 - ▶ However, **it is recommended to** take measures
 - ▶ **you should** generate a copy

Difficult: A difference in directness of Japanese and English instructions

CLARITY: Readability and translatability ◀

- ▶ *Use this, that, these, and those with noun*
Use a noun after this, that, these and those.
- ▶ **Examples:**
See the ABC Service Manual for **these**.
Once **this** is done, specific marks can be measured as substitute marks.
This will produce a test pattern.

Difficult: No determiners, but **これ、それ、あれ** in Japanese



CLARITY: Readability and translatability ◀

- ▶ *Use articles*

Use articles in **noun** phrases whenever possible.

- ▶ Examples:

Call technical representative.

Available only if image controller or network interface card is installed.

When job is stopped...

Difficult: No articles in Japanese

CLARITY: Readability and translatability ◀

- ▶ The correct use of articles requires knowledge about
 - ▶ Countable and uncountable nouns (book – furniture)
 - ▶ Do not use *a/an/many* with uncountable nouns.
 - ▶ Do not use *some/any* with countable nouns in singular.
 - ▶ Do not use *much* with countable nouns.
 - ▶ Use an article with countable nouns in singular.
 - ▶ Inherently singular entities (world, sun)
 - ▶ Specific expressions (Wednesday)
 - ▶ Singular entities in a domain (company, computer)
 - ▶ Context knowledge, topic information

This is a difficult problem for Japanese native speakers because there is no concept of countability in Japanese.

CLARITY: Readability and translatability ◀

- ▶ Examples from English data written by Japanese authors:
 - ▶ When own IP address is 196.123.435.2, ...
 - ▶ Establish connection between a computer and the ...
 - ▶ The user may select whether operation is to be continued or stopped.
 - ▶ Precaution when using two-wire type sensor.
 - ▶ When USB port is not used ...
 - ▶ When operation is resumed, ...
 - ▶ When wire is broken ...
 - ▶ When performing installation, ...

CLARITY: Punctuation ◀

- ▶ Include the serial comma in a list of three or more items.
- ▶ Examples:
 - This function is used to set the date, time and zone for ABC.
 - V.13, V.21 and V.29 only

The usage of commas is different in different languages,
so really a non-native problem.

CONSISTENCY: Hyphens ◀

- ▶ *Avoid hyphen with the prefix un- or re-*
Do not hyphenate words beginning with *re*, such as *re-do*.
Exceptions are ambiguous cases such as *re-cover*, *re-create*, and words where the vowel *e* follows the prefix such as *re-enter*.
Do not hyphenate words beginning with *un*, such as *un-do*.
- ▶ Examples.
 - Adjustment item in which **re-adjustment** is made.
 - Re-dial** attempts.
 - Re-transmit** request
 - Un-compressed mode

No hyphens in Japanese.

CORRECTNESS ◀

- ▶ *Missing Space after Sentence End*
Insert a space after the punctuation.
- ▶ Examples:
Before attempting to solve the customer problem, the following advance checks must be **made.Check** to see if:

No spaces in Japanese.

- ▶ *Avoid Possessives*

Avoid the use of possessive in technical documentation.

- ▶ Example from the corpus:

Unit 's current consumption table:

Sender machine 's name will show on the other party's LCD

This is a difficult problem for non-native speakers because tone can be expressed in different ways in languages.

J-English and US-English compared ◀

style error category	J-English	US-English
CLARITY: Readability and translatability	63.69%	30.38%
CLARITY: Simplicity of language	25.38%	43.64%
CORRECTNESS	12.09%	18.09%
CONSISTENCY	5.16%	2.75%
CLARITY: Punctuation	3.42%	0.61%
TONE	1.65%	8.79%

What can an author do about it? ◀

- ▶ Before writing, be clear about
 - ▶ Text type
 - ▶ Domain
 - ▶ Audience
 - ▶ Your own linguistic background
- ▶ Set up style rules that fit to your needs
- ▶ Use a controlled language checker

- ▶ High-quality technical documentation:
 - ▶ Correctness
 - ▶ Spelling
 - ▶ Grammar
 - ▶ Appropriateness
 - ▶ Style
 - ▶ Consistency
 - ▶ Terminology
 - ▶ Consistent phrasing

**Adapted to your
text type, target
audience, domain,
and language
background**

どうもありがとうございました。