

Creating *i+1* Content Area Readings for English Learners

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Welcome

- $i + 1$ = readings a little higher than student's current level
- *content area* = readings from ELA, history, math, science
- *English Learners* = special considerations for language acquisition, limited vocabulary, etc.

(Some) Content from this workshop is available at <https://www.osugisakae.com/tesol/teaching-resources/ohio-tesol/2017/>.

About Me

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The Tools

Readability score usually is a U.S.A. grade level.

[http://www.readabilityformulas.com/
free-readability-formula-tests.php](http://www.readabilityformulas.com/free-readability-formula-tests.php).

Vocabulary profile shows amounts of common, academic, and uncommon words. <https://www.lex tutor.ca/vp/eng/>.

The Problem

Often, readings have . . .

- difficult grammar
- long sentences
- vocabulary that is too difficult
- poor or confusing formatting

Slave Trade Reading

A system for trading slaves was created in many places. A slave trade was conducted up and down the Nile River in Africa at one point. The camel was brought to northern Africa from Arabia, allowing slave traders to establish routes through the Sahara Desert. Slaves were traded for perfumes, cloth, and spices, products that were rare in western Africa at the time.

Statistics

Group	Percent
Reading Ease	68 (standard)
Grade Level	9 (7.7–10.0)
Number of Sentences	44
Number of Words	701
Ave. Words per Sentence	16
Ave. Syllables per Word	1

Table 1: Statistics on the original reading.

Vocab Profile

Group	Percent
0-1000	73.00
1001-2000	10.86
AWL	2.00
Offlist	14.14

Table 2: Vocab profile of original (unmodified) Slave Trade reading

Rise of Big Business

This reading was used in a 7th grade social studies class—in September, not May.

The tragedy began late in the afternoon on March 25, 1911. The quitting bell had just sounded at the Triangle Shirtwaist Factory in New York City, and nearly 500 employees, most of them young immigrant women, headed toward the exit. It was Saturday, and many were looking forward to a day off with family and friends.

Vocab Profile

Group	Percent
0-1000	79.07
1001-2000	4.92
AWL	4.56
Offlist	11.45

Table 3: Vocab profile of original (unmodified) Slave Trade reading

Primary Document: “A Letter Opposing the British”

During British imperial rule in the 19th century, many Indians believed that the British were trying to force them to convert to Christianity. In a letter, Muslim leader Moulavy Syad Kutb Shah Sahib issued a warning to Hindus and Muslims in order to protect them from the British. The following excerpt from his letter reflects Indians' resentment toward the British because of religious differences. What course of action did Maulavy Syad Shah recommend Indians should take?

Statistics

Group	Percent
Reading Ease	53.5 (fairly difficult)
Grade Level	13 (10.0–16.9)
Number of Sentences	25
Number of Words	675
Ave. Words per Sentence	27
Ave. Syllables per Word	1.49

Table 4: Statistics on the original reading.

Vocab Profile

Group	Percent
0-1000	78.75
1001-2000	5.35
AWL	2.08
Offlist	13.82

Table 5: Vocab profile of original “Letter Opposing the British”

The Third Issue: Formatting

In addition to readability and vocabulary, another issue that often causes difficulties for my students is formatting. Handouts are often printed with far too many words per line, with small fonts, and with small margins. These are the most common formatting issues, and as with the vocabulary and readability issues, we can address them to help students read successfully and acquire the content successfully. The handouts packet has examples of some very user-*un*friendly readings.

Slave Trade Reading

A slave is a person who is owned by someone else and is forced to work for no money. Slaves are not free to leave or change jobs. The “slave trade” is the buying and selling of slaves. In the past, slaves were traded in many places around the world.

Statistics

Group	Percent
Reading Ease	75.8 (fairly easy)
Grade Level	6 (5.2–8.0)
Number of Sentences	62
Number of Words	695
Ave. Words per Sentence	11
Ave. Syllables per Word	1.0

Table 6: Statistics on the modified reading.

Vocab Profile

Group	Percent	Change
0-1000	74.60	+1.60
1001-2000	11.97	+1.11
AWL	1.90	-0.10
Offlist	11.53	-2.61

Table 7: Vocab profile of modified reading, showing % change from original.

Rise of Big Business

On March 25, 1911, a fire started in the Triangle Shirtwaist Factory in New York City. Almost 500 employees, most of them young immigrant women, worked in the factory. The fire spread to the tables and then to the walls. The room filled with smoke, and the air became very hot. Windows broke. Air came into the room from the broken windows. This air made the fire stronger.

Statistics

Group	Percent
Reading Ease	63 (standard)
Grade Level	8 (6.6–10.0)
Number of Sentences	41
Number of Words	488
Ave. Words per Sentence	12
Ave. Syllables per Word	2

Table 8: Statistics on the modified reading.

Vocab Profile

Group	Percent	Change
0-1000	87.84	+8.77
1001-2000	3.51	+1.41
AWL	2.27	-2.29
Offlist	6.39	-5.56

Table 9: Vocab profile of modified reading, showing % change from original.

Primary Document: “A Letter Opposing the British”

During British imperial rule in the 19th century, many Indians believed that the British were trying to force them to give up their religion and become Christian. In a letter, Muslim leader Moulavy Syad Kutb Shah Sahib warned Hindus and Muslims about the British. The following excerpt[1] from his letter shows Indians' anger toward the British because of religious differences. What course of action did Moulavy Syad Shah recommend Indians should take?

Statistics

Group	Percent
Reading Ease	69.9 (fairly easy)
Grade Level	7 (6.7–8.3)
Number of Sentences	39
Number of Words	576
Ave. Words per Sentence	15
Ave. Syllables per Word	1

Table 10: Statistics on the modified reading.

Vocab Profile

Group	Percent	Change
0-1000	83.10	+4.35
1001-2000	5.23	-0.13
AWL	1.39	-0.69
Offlist	10.28	-3.54

Table 11: Vocab profile of modified reading, showing % change from original.

Some Caveats

So far, I have assumed that the students are expected to read the content mostly by themselves. When this is not the case, the issues with vocabulary and reading level may not be as serious.

Close Reading

Ninth graders can successfully read a college-level reading, *if* the teacher prepares properly and teaches the reading actively and intentionally.

$i + 1$

We will usually want to give students $i + 1$ readings.

We also need to be aware of the difficulty of the content.

More mental energy decoding = less available for understanding content

Step by Step

Below are the steps I go through when rewriting, or creating, a reading.

Step 1

Get text of the “original”

- get digital file from content teacher
- if no digital file, scan original and do Optical Character Recognition (OCR)
- Simple Wikipedia
- Wikipedia
- other Open Educational Resources (OER)
- or, create by yourself from scratch (last resort!)

Step 2

Check vocabulary and grade level of the original

- Grades 7-12: LexTutor Classic Vocab Profiler
- Grades k-6: LexTutor Kids Vocab Profiler
- ReadabilityFormulas.com
- built into some word processors (in MS Outlook and MS Word)

Step 3

Reduce vocabulary to target level

- different, “easier”, word
- remove or replace as much non-content area off-list vocabulary as possible
- rewrite or remove slang, idioms, other language that students might struggle with
- add definitions—in footnotes or in text

Step 4

Lower reading difficulty of the passage (readability statistics)

- change a long sentence into 2 or 3 shorter ones
- replace long, multi-syllable words when possible, *especially if off-list*

Step 5

Continue lowering reading difficulty

- change passive voice to active
- check that pronouns are clear, replace with noun if needed
- rewrite bad writing to be clearer (*surprisingly common*)
- remove extraneous information as necessary
 - what is the most important information? Keep that.
 - everything else can be cut or simplified if need be

Step 6

Repeat steps 2 through 5 until the reading is at the level your students need.

Steps 7 & 8

Add images, charts, other graphics. Wikipedia is a great source.

Want to translate into another language? Now would be a good time.

- Google Translate is currently the best, I think.

Step 9

Modify Formatting

- increase font size—I like 13pt or 14pt for lower- and mid-level ELLs
- use a literacy font, if appropriate. SIL Andika is very good.
- increase margins / reduce amount of text on each line
- increase line spacing

Free / Open Content

Simple Wikipedia Wikipedia articles written for younger readers and English Learners. Great resource and usually my first stop when starting a new article.

Wikipedia can be an acceptable second choice.

CK-12 free, open, customizable content area ebooks

Rewordify web site that replaces words with “simpler” ones.

Vocabulary Data

LexTutor Vocab Profilers

Classic shows results for:

- the first 1,000 most common word families
- the second 1,000 most common word families
- words on the Academic Word List (AWL)
- words that are not in any of the first three categories

Kids shows results in 250 word groups (instead of 1,000).

Readability Tests

[ReadabilityFormulas.com](#) Great site because they run your text through several of the most popular readability formulas and give you a “consensus” opinion.

[Readable - Free Readability Test Tool](#) Another readability testing site. Cleaner than the [ReadabilityFormulas.com](#) site.

My Website

I have a wiki with many of the modified readings I have already done. It is at: [https:](https://www.osugisakae.com/tesol-wiki/index.php?title=Main_Page)

[//www.osugisakae.com/tesol-wiki/index.php?title=Main_Page.](https://www.osugisakae.com/tesol-wiki/index.php?title=Main_Page)

Please consider joining and adding your own modified readings.

The Flesch Reading Ease Formula

Readings with higher scores are *easier* to read.

$$206.835 - 1.015 \times \frac{\text{totalwords}}{\text{totalsentences}} - 84.6 \times \frac{\text{totalsyllables}}{\text{totalwords}}$$

Interpreting scores¹

Score	School level	Notes
100.00-90.00	5th grade	Very easy to read.
90.0-80.0	6th grade	Easy to read.
80.0-70.0	7th grade	Fairly easy to read.
70.0-60.0	8th & 9th grade	Plain English.
60.0-50.0	10th to 12th grade	Fairly difficult to read.
50.0-30.0	College	Difficult to read.
30.0-0.0	College graduate	Very difficult to read.

¹Flesch, Rudolf. "How to Write Plain English". University of Canterbury.

The Flesch-Kincaid Grade Level Formula

$$0.39 \times \frac{\text{TotalWords}}{\text{TotalSentences}} + 11.8 \times \frac{\text{TotalSyllables}}{\text{TotalWords}} - 15.59$$

The result is an approximate USA grade level for the reading.

Gunning Fog Index

$$0.4 \times \left(\frac{\text{Words}}{\text{Sentences}} + 100 \times \frac{\text{ComplexWords}}{\text{Words}} \right)$$

Looks at “complex” words. (Words with three or more syllables)

Names, jargon, grammatical suffixes, and the such are ignored when calculating the Gunning Fog index.

Coleman-Liau Readability Formula

Depends on the number of characters

Was made with automated checking in mind

$$0.0588 \times L - 0.296 \times (S - 15.8)$$

L is the average number of characters per 100 words.

S is the average number sentences per 100 words.

Sources

https://en.wikipedia.org/wiki/Flesch-Kincaid_readability_tests

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[http://www.readabilityformulas.com/
coleman-liau-readability-formula.php](http://www.readabilityformulas.com/coleman-liau-readability-formula.php)

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