WordSift: Using Computer-Assisted Language Learning (CALL) to Increase ELs’ Math and Science Literacy

Kenji Hakuta and Diego Roman

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What is WordSift?

Theoretical Background

Features

Word Lists
What is WordSift?

- Interactive tool designed to help teachers to support ELs
- Linguistic playground
  - Instantly captures and displays vocabulary structures of texts
- Quickly identifies important words that appear on texts
- Combines different methods of vocabulary acquisition:
  - Tag Clouds, images, context display from original text source
Theoretical Background

- Increasing attention to complexities of reading comprehension in adolescents
- Vocabulary involves reading skills connected to comprehension: decoding, sight-word recognition, reading fluency and accuracy
- Vocabulary knowledge might be the most widely shared problem among struggling readers
- ELs continue to have vocabulary challenges even after being “reclassified”
Theoretical Background (Cont.)

- Vocabulary performance can predict cognitive processing (phonological, orthographic) and reading rates
- High correlations between vocabulary scores and reading comprehension scores
- Vocabulary challenges include academic and subject-specific words
- Vocabulary instruction can have an important effect on students’ word learning (especially for ELs)
- Language instruction is the responsibility of all teachers, not only ELA or ELD teachers
  - Teachers need tools to move into this direction
WordSift Features

- Tag Cloud
  - Mark word lists
  - Sort words by frequency in the English language
- Visual-Thesaurus® display
- Google image search
- Google video search
- Sample sentences
Word lists

- Stop words (not included in WordSift)
- Academic Word List (AWL)
- General Service List (GSL)
- Subject-specific word lists
  - Social Studies, Math, Science, Language Arts
Questions
Potential Uses of WordSift
Live Demonstration
Other activities
Questions
Possible Uses of WordSift

- Lesson preparation
  - Identify challenging words or concepts
- Previewing text
  - Whole class or individual students
- Group activities
  - Tag cloud games
- Literacy support
  - Summary responses
- Assessment
  - On-the-fly assessments (identify unfamiliar words, select images that represent words)
Live Demonstration

- Science lesson topic:
  - The Galapagos Islands
- Printable version
- Select and copy text
- Paste text into WordSift [www.wordsift.com](http://www.wordsift.com)
WordSift Display

- 50 most frequent words on text
  - Largest font represents the most frequent
- Sort feature
  - Common-to-rare, rare-to-common, alphabetically
- Mark feature
  - Word lists
- Squish and unsquish cloud
WordSift Display

- Visual Thesaurus® word web
  - Hover over words for definition
  - We recommend buying the full version of Visual Thesaurus®

- Google images and videos result
  - Based on two-most frequent words
  - Can be refined

- Examples from source
  - Sentences that allow users to gather information from context (expand or collapse additional text)
WordSift Display

- Clicking on any word changes the display
- Select any word list
  - Science for example
- Words that appear on the science word list are highlighted
- Any word list can be selected
Developing Glossaries using WordSift

- Create a table in Word
- Select a word from the word cloud (e.g. population)
- Write down that word in your glossary document
- Copy and insert a picture associated to this word from the Google images displayed
- Write down the definition of this word by hovering over the Visual Thesaurus® word web
- Choose a sentence from the sample sentences section to represent how the word can be used
**POPULATION**

<table>
<thead>
<tr>
<th>DEFINITION</th>
<th>WORD WEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>A group of organisms of the same species inhabiting a given area.</td>
<td><img src="image" alt="Word Web Diagram" /></td>
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</tbody>
</table>

<table>
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<tr>
<th>PICTURE</th>
<th>EXAMPLE SENTENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Population Illustration" /></td>
<td>Along with whalers came the fur-seal hunters who brought the population of this animal close to extinction.</td>
</tr>
</tbody>
</table>
Venn Diagrams using WordSift

SCIENCE
Animal
Area
Darwin
Research
Land
Species

SOCIAL STUDIES
Year
Charles
Population
Sea

English
Expedition
Government
Island
National
Native
Province
South
Spanish
World
Year