Robust learning of vocabulary: investigating the relationship between learner behaviour and the acquisition of vocabulary

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Introduction

- Need for long-term studies of L2 learning in intensive English programs
- Need for clarification of success of incidental and explicit vocabulary learning
- Need for a wider range of vocabulary activities in the ELI reading curriculum
- Availability of REAP technology: 10 million texts searchable by grade level, length and vocabulary item

The experiment showed that making hints available on line to students did provide support that they were interested in receiving. Students clicked on 71% of hints.

Experiment Design

- Target vocabulary selected from Coxhead word list
- Pretend to select individual student’s set of target words
- Based on target word list, student receives texts at grade 6 – 8 level with 2 to 4 target words
- If students get the question on the target word correct, the word is seen again later.
- If the student gets the question wrong, target word shown again almost immediately
- "Mastery" was defined as 2 successful correct answers for a given word
- Subjects could click on the word’s definition in English.

Results

<table>
<thead>
<tr>
<th>Basic Correlations (n=19)</th>
<th>1. Number of texts read and total words mastered</th>
<th>2. Hints clicked and total words mastered</th>
<th>3. MTELP score and total words mastered</th>
<th>4. Accuracy on questions and total words mastered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r= .86, p ≤ .0001</td>
<td>r= .16, ns.</td>
<td>r= -.11, ns.</td>
<td>r=. 00, ns.</td>
</tr>
</tbody>
</table>

Interpretation of Results

- Students seem to use the hints a great deal (on average 71% of hints are used), but this use of the tool does not predict "mastery"
- Number of documents read is the strongest predictor of words "mastered"
- "Mastery" is NOT predicted by general proficiency scores, which means that the tool is providing information not available in the students’ vocabulary
- Focus on accuracy in answering target questions may slow students down, and result in less learning since accuracy on target questions does not predict "mastery" of new words.

Discussion

The experiment showed that making hints available on line to students did provide support that they were interested in receiving. Students clicked on 71% of hints.

However, use of hints did not improve mastery over the course of the term. It is possible that because all the students used the hints, the effects were not visible.

Clearly, some students were able to read more texts than others. More rapid reading, more text read, led to more words mastered. This is not surprising, but it confirms a view of some reading teachers that slowly poring over individual words is not efficient. However, it is hard to persuade students of this fact.

The REAP software showed the ability to supply tests that correspond to individual needs, but will be extended so that it also finds documents that are interesting to the students.

A follow up on testing long-term retention is planned.

Future Questions

Future research will consider whether providing more input through REAP on known words will increase knowledge of:

(a) collocations that are idiosyncratic and
(b) verb meaning – syntax correspondences that are not idiosyncratic.

Summary

An experiment using REAP technology to automatically select texts that matched individual students’ vocabulary learning needs showed that the number of documents that a student read was the best predictor of mastery.

Most students used hints provided on-line. This contrasts with an earlier study by Hulstijn et al (1996), which showed that students did not use dictionary resources when they were available offline.

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Information about Participants

The students in the ELL are from a variety of countries, including China, Korea, Taiwan, the Middle East and Latin America.

The students are from Level 4 reading classes, i.e. Intermediate English.

Many students intend to pursue academic studies in the US or Canada, but many are also studying English for general purposes.

The Stimuli

- Texts from the world-wide-web via REAP filtered by reading level, length, and content of the target words
- Target vocabulary selected from Coxhead word list
- 30 documents with vocabulary items used in texts identified by Coxhead (2000). Each student had a different set of words, according to their individual knowledge.

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